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ABSTRACT

This guide deals with the development and implementation of a teacher-centered team-approach program for providing career guidance to students in electrical occupations courses. The first part of the guide examines various goals of a career guidance program for students in electrical and electronics courses, including helping middle school students progress from exploratory courses to preparatory courses to actual electricity and electronics courses in high school, helping students prepare for postsecondary training and employment, increasing staff effectiveness in meeting the needs of disabled and disadvantaged students, defining the role of cooperative work experience programs in electricity and electronics, creating student organizations in connection with an electricity and electronics program, and establishing procedures for follow-up with graduates and employers. Addressed next are females and electronics, horizontal articulation, addenda project resources, career exploration strategies, youth organizations, math and science career exploration and special minicourses, cooperative work experience advisory committees, follow-up study samples, and outside speakers for electronics classes. (MN)

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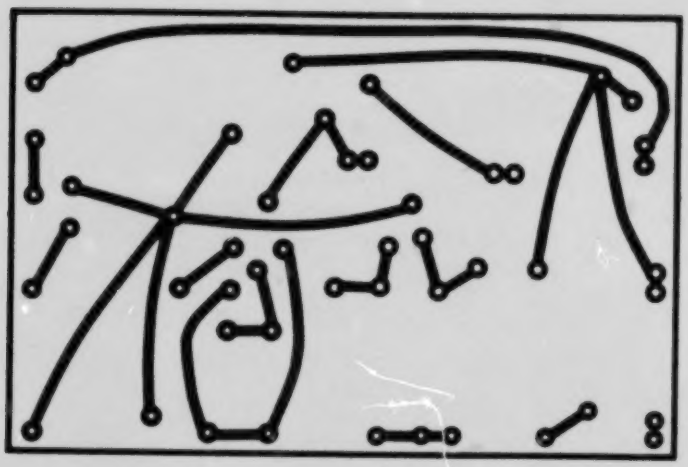

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PORTLAND PUBLIC SCHOOLS

ELECTRICAL OCCUPATIONS CAREER GUIDANCE GUIDE

DEVELOP AND IMPLEMENT MODEL
ELECTRICAL CLUSTER PROGRAM

GRANT NO. 26-001-995
VEC. NO. 20-462

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OCTOBER, 1983

OREGON DEPARTMENT OF EDUCATION
CAREER AND VOCATIONAL EDUCATION DIVISION

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It is the desire of the Electrical Guidance Task Force Committee to develop a plan to evaluate, improve and expand the electrical cluster in Portland and develop a model using an interdisciplinary approach to help implement and coordinate electrical programs in Benson and Cleveland. The Task Force Committee members who collaborated in preparation of this model approach during the 1981-82 school year were:

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CAREER GUIDANCE

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CAREER GUIDANCE COMPONENT

ELECTRONICS PROGRAM

Career development and education should be available to all students through the team efforts of teachers, counselors, administrators and community. This should be facilitated through career guidance, exploration, subject matter, occupational information and on-the-job training in a realistic setting. The student can then come to understand his/her own abilities and how these abilities relate to requirements for a successful career or careers.

An optimum career exploration and preparation program will utilize trained guidance personnel who will not only to help solve individual student problems, but to work with teacher and administrative staff so that all personnel who are working with students will develop and use a guidance point-of-view.

The teacher-centered guidance program uses a "team approach" which utilizes administrators, counselors, instructional staff and other resource people in the processes of (1) Pupil appraisal, (2) Educational guidance, and (3) Exploratory and work activities in a career program.

1. Pupil Appraisal - this process includes the identification of student abilities, academic strengths and weaknesses, interests, problems, and special talents. Use is made of standardized testing instruments, classroom evaluation procedures devised by teachers and

self-evaluative instruments for student use. The purpose of the process is student self-understanding to aid them in the decision-making process required by the educational planning and career-exploration. Inclusion of activities for self-evaluation and recognition of attitudes and values is strongly recommended.

2. The Educational Guidance - process should include staff assistance for each student in the planning and selection of a school program which will be of most value for the career choices made now and later. In many schools, this would be an impossible task for the guidance specialist and points up the need for teachers to be guidance oriented. Attention should also be given to orientation activities relating to school and community, student scheduling, placement and evaluation, study habits, pupil self-appraisal information, student-teacher-parent conferences, pupil record maintenance, curriculum activities, community resources and assistance for parents as they become involved in their youngster's educational planning.

3. Exploration and Work Activities - may be identified as any learning experiences which will be useful in making eventual career choices. They should include information about jobs, observation of work and actual work experiences. Group guidance procedures are useful for distribution of career information and materials, discussions of personal attitudes and values, teaching decision-making skills and identifying the need for individual counseling.

Goal #1: Assist Middle School Students to progress from Exploratory to Preparation programs in electricity/electronics.

Example: John/Mary enrolls in ABC Middle School. Student is exposed to career education materials and learns about his/her interests, aptitudes, abilities. Counselor shares information regarding importance and value of technical subjects, such as math and science, and urges youth to investigate technical careers such as electronics. John/Mary enters pre-vocational class and is further exposed to industry and technology through field trips, guest speakers, and classroom instruction. Finally, teachers-counselor- parent-student confer regarding John's/Mary's aptitude for this type of work and forecast accordingly.

Objectives:

I. Assist the student to gather for his/her own use as much information as possible about him/herself - needs, goals, abilities, values, interests, attitudes, beliefs and traditions.

   A. Assist students in values clarification process, identification of aptitudes and interests, and long and short term goal setting.

   B. Provide group guidance and personal counseling to assist students in educational planning and course selection.

   C. Provide experiences so student can explore the interests and abilities needed for success in the electronics industry.

Use these resources: See Addendum: 1975 Portland Public Schools Career Exploration Guide - pp. 131-140.

Rivergate Project: pp. 3, 19, 20-21.

Teaching Occupational Skills: Understanding Self-Section 3

Search to Success, pp. 50-51 (1975 Ed.).

II. Assist student to learn to use resource materials and people for in-depth study of technical occupations such as electronics.

A. Provide information about how electronic jobs relate to data, people, things.

B. Provide opportunities for students to explore at least two jobs in the electronics industry utilizing job analysis outline.

C. Develop field trips, invite guest speakers and highlight new advances in technology to expose youth to State of the Art Electronics.

D. Coordinate student activities so each student can acquire a minimum of five hours hands-on experience in electronic vocational classes.

E. Assign students research so they will be able to identify major electronics firms in Oregon.

Use these resources: Dictionary of Occupational Titles - Vol. 1, pp. 245-246.

Computer Information System (CIS).

Addendum: Field Trips - Speakers Guide

III. Assist student to evaluate him/herself as a future employee; understand what factors about him/her might affect his/her getting, holding and succeeding in job.

A. Provide activities so students will become aware of basic skills which are necessary for minimum acceptable performance in an occupation.

B. Foster employability skills in youth such as punctuality, dependability, getting along with others, teamwork.

C. Provide activities so student may demonstrate an understanding of the importance of personal grooming relative to finding and fulfilling a job in the electronics industry.

Use these resources: Rivergate Project: pp. 72-73.

Teaching Occupational Skills: Introduction p. 11.

IV. Assist student to understand the importance of legible writing, speaking, listening, reading, computation, composition, spelling and interpersonal communications.

A. Establish individual career file, kept by student, which will allow them to practice writing, reading, composition, spelling.

B. Provide opportunities to learn interpersonal skills and demonstrate knowledge of effective human relations.

C. Provide activities so student may demonstrate ability to receive, interpret and follow written and oral instructions.

D. Provide youth with role models adept at communicating such as school personnel, community/public figures, employers.

Use these resources: See Addendum: Student File Folders.

Teaching Occupational Skills: Interpersonal Relations - Section 4; Effective Communication - Section 5.

V. Understand the value of taking math and science courses in relation to technical careers.

A. Provide information so student will learn differences between traditional and nontraditional careers and will have explored issues regarding sex stereotyping.

B. Relate math and science courses to current requirements in the electronics industry.

C. Utilize activities that will reduce fear of technical knowledge involved in math and science courses.

D. Provide appropriate role models, especially for young girls in the math and science areas.

Use these resources: See Addendum: Math and Science Mini Course.

WINC: Sex Stereotyping Unit and Introduction Unit.

Goal #1A: Assist students to move from Exploratory to Preparation programs in electricity/electronics at the *High School level.

Example: John/Mary enters ABC High School. Youth is exposed to in-depth career study. Math-Science-Vocational instructors develop group presentations to interest students in technical careers such as electronics. Students then explore world of work in addition to post-high training options. John/Mary enrolls in vocational class and, with assistance of counselor and teachers begins to develop a high school plan which will include necessary subjects and training to enter a career in electronics. John/Mary enrolls in cluster program which eventually leads to the co-op work experience program and future training.

Objectives:

I. Assist student to develop self-understanding - his/her needs, values, abilities, skills in decision making, problem solving and assessing, and developing tentative cluster choice.

A. Re-expose youth to values clarification, problem-solving techniques and decision-making patterns.

B. Provide opportunities for small group situation where students can use communication skills and learn to relate and interact positively.

C. Assist student to determine if they possess necessary abilities and aptitudes to succeed in electronics industry - utilize GATB at this level.

Use these resources: See Addendum: Apprenticeship Training

See Addendum: Personal Aptitude Evaluation

Teaching Occupational Skills: Problem Solving Section 6; Effective Communication Section 5

CIS Computer: Electronics Careers

II. Assist students to explore businesses in electronics industry and to become aware of employment trends and projections.

A. Invite employers from business and industry to speak to students about electronics careers.

B. Invite knowledgeable individual from local employment office to discuss current employment trends with students.

C. Design small scale exploration program either through group field trips or individual placements.

Use these resources: See Addendum: Mini-Exploration Guide

Explorer Scout Posts: Contact Boy Scouts of America

III. Provide group guidance and personal counseling to inform students about math and science requirements for apprenticeship programs and technical careers.

A. Relate to students, requirements in terms of math and science courses in relation to electronics courses.

B. Attempt to reduce level of math anxiety, especially in young women.

C. Provide role models who are excited about their involvement in math and science careers, expecially for young women.

Use these resources: See Addendum: Math and Science Mini-Course

WINC: Sex Stereotyping Section 2 - Girl Students Must Beat Math Myth

WINC: Women and Work History - Section 3 - Odds on You (math game)

IV. Assist each student to develop a satisfactorily written resume and correctly complete sample job applications.

A. Provide youth with samples of completed resumes and job applications.

B. Assist students to develop written communication skills in terms of spelling, grammar and punctuation.

C. Secure sample job applications from actual electronics firms such as Tektronix, Intel, etc.

D. Invite employers from electronics firms to discuss employment procedures and standards with students.

Use these resources: Search to Success: pp. 17-26

Oregon Survival: pp. 33-40

V. Provide opportunities for students to have at least three on-site job observations in electronics industry as well as 25 hours of hands-on electrical/electronics related work experience in school or community.

A. Allow students to visit community colleges, private trade schools, apprenticeship centers to expose youth to opportunities in this field.

B. Develop on-site exploration program for youth in electronics cluster.

C. Design small scale electronics co-op work experience program.

D. Provide activities to assure that students can identify major electronics firms in Oregon.

Use these resources: See Addendum: Mini-Exploration Guide

See Addendum: Co-op Work Experience Guide

Goal #2: Assist students to move from preparation programs into post secondary training.

Example: John/Mary has completed electronics cluster program at high school level and wants to continue education in electronics area. Counselor exposes youth to a variety of training options such as community colleges, trade schools, and apprenticeship programs. Using decision-making model, student and counselor list advantages-disadvantages of each type of training. For example, if student needs quality training at an affordable price over a reasonable period of time such as 1-2 years, then the community college will provide youth with necessary skills for success in the field of electronics.

Objectives:

I. Foster necessary academic skills needed for success at college level.

A. Assist students in developing good study habits, i.e., quiet study space, proper lighting, appropriate supplies, etc.

B. Teach youth about time management techniques.

C. Review students' academic progress to date.

D. If needed, encourage youth to take additional math and science courses needed for entrance into technical programs.

Use these resources: See Addendum: Math and Science Mini-Course

WIN Book: Unit 7 - Career Success Styles

Utilize Counselor Records

Rivergate Project: p. 87

II. Encourage youth to display good work habits, practice personal grooming, take pride in their work and follow through on all assigned tasks.

A. Structure classroom setting to resemble work environment.

B. Set definite times for arrival and departure.

C. Assess students' personal hygiene habits and counsel if necessary.

D. Give students feedback regarding performance.

E. Assign deadlines for all classwork that is to be completed.

F. Encourage youth to display ambition, initiative and eagerness to learn.

Use these resources: Search to Success: pp. 28 & 29 - Personal Grooming

Addendum: Model Vocational Education Program

Rivergate: p. 56, p. 135, p. 164

III. Acquaint youth with post-high school technical training programs offered at community college level.

A. Describe difference between academic and technical programs at community college level.

B. Invite community college personnel to acquaint youth with post-high offerings.

C. Encourage youth to tour college campus and visit electronics shop.

IV. Assist youth in completion of financial aid forms, college entrance applications or registration forms, collecting necessary documents such

as transcripts, recommendations, and making course or program selections.

A. Invite counselor to hold financial aid workshop for students in electronics cluster.

B. Assist students to complete sample college or technical school applications.

C. Explain procedures for obtaining transcripts or recommendations.

D. Assist youth to select proper electronic courses and programs depending on their area of interest.

Use these resources: See Local Community College Catalogs
College Registration Forms
Financial Aid Forms

Goal #3: Assist students to apply for Apprenticeship Programs.

Example: John/Mary has completed electronics cluster program and is interested in the apprenticeship program. Counselor and student make contact with Apprenticeship Council to determine what openings exist, when applications are being taken, and what are the requirements for program entry. Student collects transcripts, recommendations, test results, and submits to Apprenticeship Board. John/Mary receives rating in accordance with interview and background. Students with highest scores are selected first for placement, while others remain on waiting list.

Objectives:

I. Increase counselors' knowledge about apprenticeship programs so that they understand all requirements that students must meet to be accepted into programs.

A. Disseminate Oregon Apprenticeship Books for counselor use.

B. Arrange informational meeting between Apprenticeship Council and school staff.

C. Establish contact within apprenticeship system that will assist counselors to place youth in outreach programs.

D. Arrange for counselors to visit training schools and talk with apprentices.

Use these resources: See WINC: Units 5 & 6 - Access to Careers - Career Ladders

Oregon Apprenticeship Book

Specific Union Information

II. Acquaint youth with Apprenticeship Program as one source of technical training.

A. Invite union and apprenticeship representatives in to explain programs.

B. Invite current apprentices in to describe the programs in which they participate in (must be arranged with employers or unions.)

C. Develop small scale apprenticeship program within school, such as: assistants to shop teachers, working with building maintenance personnel or district shop personnel. These hours would be recorded, tallied and entered on students' records.

D. Arrange field trips to union training centers.

Use these resources: Contact Union Apprenticeship Council

III. Plan special activities for young women to build physical strength and to acquire tool knowledge.

A. Encourage young women to become involved in regular physical education classes, especially weight-lifting.

B. Acquire assistance of physical education staff, design physical activities to build strength, demonstrate proper lifting techniques, etc.

C. Develop after-school mini-program in tool identification and use.

Use these resources: Females and Electronics Component

Career Exploration Guide - 1974, p. 61

IV. Identify acceptable transcript records which will be used by Apprenticeship Council to review students' academic history.

A. Meet with Apprenticeship Council regarding current procedures used to assess student records.

B. Develop special form for keeping track of vocational courses and related work experience.

Use these resources: Addendum: Questions and Answers About Apprenticeship Training

Contact Local Apprenticeship Board

Goal #4: Assist students to find post graduation job placement.

Example: John/Mary graduates from ABC High School with training in electronics, and decides to go directly to work. The youth has accumulated resume materials, learned about job applications, interviews, and various job referral sources. With the knowledge of these resources and the help of the school, parents and friends, John/Mary seeks out opportunities that will utilize his/her electronics training.

Objectives:

I. Make students aware that work is the basis of production--production is basis of goods and services--goods and services are the source of necessities, comforts and conveniences in life.

Understanding the world of work involves:

A. Learning the structure of organizations.

B. Developing motivation for work.

C. Analyzing self in relation to job and other employees.

D. Responding to authority and responsibility.

E. Adapting and planning for the future.

F. Coping with conflict and change.

G. Learning problem solving skills.

Use these resources: Teaching Occupational Skills: Units 1-12

Coping in the World of Work - Practice in Problem Solving

II. Assist students to develop employability skills.

Developing employability skills include:

A. Learning effective communication skills.

B. Understanding interpersonal relations.

C. Displaying ambition and initiative.

D. Exhibiting a willingness to learn.

E. Demonstrating acceptance of responsibility and ability to follow through on tasks.

F. Developing time management skills.

G. Exhibiting proper grooming habits.

Use these resources: See Career Exploration - Curriculum Guide, 1974, p. 51, p.72

Rivergate Career Project, p. 108, p. 132

Search to Success, pp. 28-29

Methods and Material for Teaching

Occupational Survival Skills, Units 4, 5, & 8

III. Assist students to develop job readiness skills.

Job Readiness Program includes:

A. Sources of job information.

B. Preparation for an interview.

C. Resume writing.

D. Aptitude and Interest Tests.

E. Writing letters.

F. Completing job applications.

G. Job search techniques.

Use these resources: Search to Success, pp. 6-7, 13-26

Oregon Survival Handbook, pp. 22-24, 32, 33-40

WINC Book: Unit 5 - Exploration; Unit 8 - Job Hunting for Nontraditional Careers

IV. Acquaint youth with existing job referral sources and provide methods for finding work.

Methods for finding jobs

A. Door-to-door search

B. Yellow Pages

C. School work programs

D. Contacts through relatives and friends

E. Want ads

F. Referral by previous employers

G. City, state, federal employment services

H. Armed services

I. Private employment agencies

J. Contacts with special groups or organizations

Use these resources: See WINC Book: Units 5 & 8

Search to Success, pp. 6-7

Contact City, State, Federal Agencies

Contact Armed Services

What Color is Your Parachute?, Bowles, 1979

Goal #5: Increase staff effectiveness in meeting the needs of handicapped and disadvantaged students.

Example: John/Mary is a handicapped/disadvantaged student at ABC High School. Decision is made that John/Mary may benefit from vocational training. If possible, he/she is referred to a Vocational Assessment Program, and rated according to standardized tasks. Upon receiving ratings, youth could be exposed to a mini-vocational course that would include learning names of machines and tools, safety practices, clean-up procedures. The handicapped/disadvantaged instructor and vocational instructor meet to discuss if student might benefit from regular vocational classes. If decision is affirmative, then student is mainstreamed and should receive special assistance to meet individually determined goals. Severely handicapped/disadvantaged students may require specialized programs or developmental activities.

Objectives:

I. Upgrade teaching and administrative staff competence in working with disadvantaged/handicapped youth.

A. Develop understanding of disadvantaged/handicapped youth's environment and identify special problems experienced by disadvantaged/handicapped individuals.

B. Increase staff's knowledge regarding careers, especially in relation to the electronics industry.

C. Create strategies for identifying disadvantaged handicapped youth and getting them involved in programs.

Use these resources: See Addendum: Disadvantaged/Handicapped Materials
Vocational Education for Mentally Retarded Students
Idea Book - Meeting Occupational Needs of Disadvantaged Youth
Career/Vocational Guidance Competencies for Education

II. Develop special vocational programs for students who are unable to profit from regular vocational programs.

A. Modify regular ongoing preparation programs.

B. Provide special preparation programs for handicapped/disadvantaged students if they are unable to succeed in regular programs.

C. Develop low language, low reading level curriculum for vocational program.

D. Rewrite existing vocational materials into low language levels appropriate to special students.

E. Develop learning packet dealing with the emotional, academic and communication needs of special students for staff members working with disadvantaged/handicapped youth.

F. Develop more in-school, on-the-job work experience.

G. Develop mini-packets on personal good grooming habits, employability skills for disadvantaged/handicapped students.

Use these resources: See Addendum: Disadvantaged/Handicapped Packet
Vocational Education for Mentally Retarded Students

Idea Book - Meeting Occupational Needs of Disadvantaged Youth

III. Identify barriers to employment for disadvantaged/handicapped and assist staff and student to select appropriate employment goal.

A. Develop lines of communication to foster closer work between counselors and teachers who work with youth.

B. Work closely with administrators to identify low income youth.

C. Create mini-electronics program to expose disadvantaged/handicapped youth to this occupation.

D. Assist each student to develop to his/her maximum potential.

E. Develop activities to raise student self-esteem.

Use these resources: See Addendum: Disadvantaged/Handicapped Packet
Vocational Education for Mentally Retarded Students
Idea Book - Meeting Occupational Needs of Disadvantaged Youth

IV. Assess physical barriers for handicapped. Assess attitudinal barriers towards handicapped on part of staff and other students.

A. Do a routine survey of building entrances, exits, classrooms to determine accessibility - improve or remove barrier.

B. Make staff aware of their attitudes toward the handicapped/ disadvantaged.

C. Develop a buddy system to help all youth understand each other.

Use these resources: WINC - Unit 8

Goal #6: Define role of co-op work experience program in electricity/electronics.

Example: John/Mary is enrolled in electronics cluster program. He/she desires part-time job to further electronics knowledge and

to earn income for future training. The vocational teacher and counselor/coordinator work together to place youth in electronics related job. John/Mary receives supervision at school and on the job with the employer. Credit is earned through this program.

Objectives:

I. Explain benefits of a co-op work experience program to staff, students, parents.

Co-op work experience programs involve:

A. Creating reality based understanding of world of work.

B. Assessing interests, aptitudes and abilities of students.

C. Selecting students in vocational programs for job programs.

D. Providing pre-employment training for youth.

E. Establishing job sites.

F. Developing mutual rapport between school-employer-youth.

G. Completion of training plan which describes employee-employer responsibilities.

H. Designing follow-up program for evaluation purposes.

Use these resources: See Addendum: Co-op Work Experience Guide
Career Education Curriculum Manual, Area III - 1973 - Cooperative Section

II. Develop students' technical knowledge as well as work and career related competencies.

A. Make students aware of technical knowledge required for success in electronics industry.

B. Provide youth with necessary vocabulary to understand technical terms.

C. Explain relationship between in-school and on-the-job training.

D. Foster work related competencies, such as:

1. Understanding dynamics of work relations.
2. Learning what productivity is and how it is measured.
3. Developing and applying good work habits.
4. Acquaint youth with opportunities in electronics industry.

Use these resources: Career Education Guide, Area III - 1973 - Co-op Section, pp. 36 & 41
Electronics Cluster Guide
Search to Success, pp. 50-51
Contact Electrician Union

III. Create public relations program which will promote work experience programs.

A. Utilize all communications media in promoting co-op work experience programs.

B. Maintain a current public relations file.

C. If news occurs, notify the educational writer or editor in the respective media.

D. Create future stories which can be submitted to media at appropriate times.

E. Report to students, faculty and administrators regarding news about co-op program. This can be done through school newspaper, newsletters, films, slides, charts or end-of-the-year report.

F. Establish contacts with parents, as they are often biggest boosters of co-op programs.

G. Initiate student awards ceremony for "Student of the Year."

H. Involve alumni in promoting vocational education and cooperative work experience.

I. Sponsor an employer-employee banquet expressing appreciation to employers and other company personnel.

IV. Develop guidance and counseling program which will encourage youth to enroll in cooperative work experience programs.

A. Develop effective counseling techniques to help youth recognize their special interests and aptitudes.

B. Identify students in vocational programs who might benefit from co-op work program.

C. Confer with parents about value of work experience.

D. Review students' choices periodically to evaluate:

1. Career objectives
2. Achievement in relationship to aptitude and ability
3. Personal and social development
4. Job performance record

Use these resources: See Addendum: Guidance and Counseling Functions

Contact Oregon Industry Council

Guidance and Counseling Programs - PPS

Interest and Aptitude Surveys:

Job-O

CIS-Quest

GATB

PSAT

SAT

Goal #7: Create VICA program in connection with electronics program.

Example: Vocational teacher at ABC High School wants to round-out

classroom experience with other activities. Teacher contacts local VICA officers to inquire about becoming involved. VICA provides materials and suggestions and teacher sets up program, attracts students-employers-possibly parents to get involved. VICA activities stimulate classroom learning, provide a connection to the world of work, and allow students to develop leadership qualities.

Objectives:

I. Identify population to be surveyed.

A. Choices:

1. Follow-up of all vocational students.
2. Follow-up of first year graduates.
3. Follow-up of program employers.

B. Make sample determination:

1. Sample must be adequate to allow estimates of the characteristics of the target population to be made with relative assurance of accuracy.
2. Sample must be representative of entire target population.
3. Sample size--the larger the sample, the greater accuracy of information.

Use these resources: Secure List of: Vocational Students
First Year Graduates
Program Employers

Addendum: Cook Book Approach to Surveys

II. Design instrument to gather desired information.

Topics to be covered should include:

A. Availability of vocational training.

B. Rating of guidance, counseling and placement services.

C. Rating of facilities and equipment.

D. Rating of curricular content and scope.

E. Student employment success:

1. Employed vs. unemployed

2. Wage rates

3. Employer satisfaction

F. Collection of data regarding number of females/males, minorities, handicapped/disadvantaged persons employed.

Use these resources: Addendum: Vocational Follow-up Survey

Addendum: Employer Letter and Survey

III. Record, tabulate and summarize the information gathered.

Recording and retrieving information

A. Data Collection:

1. Manual - Data stored on paper forms must be filed and data retrieved individually off each form.

2. Mechanized - Uses same type of machinery in retrieval of data--use of card sorters and tabulators.

3. Automated - Uses electronic computers, data stored on magnetic tapes or discs.

B. Conducting survey:

1. Mail questionnaire--first mailing.

2. Mail follow-up card to nonrespondents within two weeks.

3. Utilize student aides, PTA staff, career ed staff, volunteers, to attempt to reach student by phone.

C. Tabulate data:

1. Categorize information by counting responses for every item as well as number of respondents.
2. Plan for merging or separating of data to determine similarities and differences.

D. Analyzing data:

1. Numbers may be converted to percentages if care is taken to describe respondents so as not to mislead reader.
2. Be sure interpretation is rational and accurate.
3. Back all conclusions with solid information.

IV. Design process for disseminating information to public.

Disseminating Information

A. Define users of information:

1. General public
2. Educational planners at local, state and federal levels
3. Local boards of educators
4. Vocational advisory committee
5. Respondents to survey

B. Factors to consider when disseminating information:

1. Go through proper chain of command when presenting data.
2. Avoid school-to-school vs. program-to-program comparisons--stick to survey results.
3. Send an accompanying cover letter telling recipient what the report is.
4. Present data to as many appropriate groups, agencies and individuals as possible.

Goal #8: Establish procedures for follow-up with graduates and employers.

Example: John/Mary graduated last year from ABC High School and the school wants to assess his/her current situation. A sample population is contacted by letter/phone to determine if student is working, attending school or other. The youth is asked to evaluate his/her vocational training. Former employers are also contacted and asked to assess the quality of school vocational programs. Results are colected, tabulated and disseminated to appropriate parties for further use.

Objectives:

I. Explain role of youth organizations and the components of the program to teachers, students, parents.

A. VICA--Vocational Industrial Club of America:

1. Used to complement, supplement and strengthen electricity/electronics programs.
2. Gives greater scope and depth to total instructional programs.
3. Provides an avenue of enrichment of the instructional program though competitive events and activities (civic projects, social awareness, career development).

II. Describe how teachers can enhance curriculum by utilizing VICA model in classroom.

Teachers can use VICA to:

A. Complement classroom and on-the-job instruction.

B. To encourage student responsibility.

C. To develop student leadership.

D. To develop and strengthen a close student-teacher rapport.

E. To increase their own awareness of the value of vocational education.

III. Identify benefits VICA can provide to students.

Benefit to students

A. Chapter identity

B. Personal and group recognition

C. Motivational involvement

D. Group participation

E. Competitive activity

F. Unlimited opportunity for personal growth and development

Use these resources: See Addendum: Youth Organization

Contact Local VICA Chapters

FEMALES AND ELECTRONICS

Females are currently under-represented in electrical/electronic career fields. For example, 4% of electrial and electronic engineers are female, 12% of electrical and electronic technicians are female, and around 3% of the workers in the electrical/electronic trades are women (1980 Department of Labor statistics). The causes of this under-representation are complex. Some, however, can be directly related to the experiences of young women in school. These include:

- insufficient career knowledge on the part of the female students
- stereotyped expectations and assumptions made of young women in the classroom, including peer pressure from male and female students
- lack of experience outside the classroom which might interest and motivate girls to pursue electronics in school

Insufficient career knowledge. Over 90 percent of the female students presently enrolled in school will work as wage earners at some point in their lives. These young women can expect to spend an average of 25 years in the work force. Women work for the same reasons as men: they have an economic need for work. Many women workers are single, widowed, divorced, separated, or have husbands earning less than $10,000 per year.

The economic need for work is futher accentuated by the fact that for every dollar that a full-time working man earns, his female counterpart earns 59 cents. This earnings gap has actually increased over the past 25 years. The average female worker must attend five years of post-secondary school to earn what the average male worker with an 8th grade education earns.

The fact that women are entering the work force in greater numbers (since World War II, the number of female workers has increased by 135

percent) combined with the widening earnings gap makes the need for career and vocational education for females crucial. Since one-third of working women are the sole support of their families, women need to have financially realistic career goals.

For too long, female students, along with their teachers, counselors and parents, have not fully recognized the above facts. In general, boys have left school better prepared for the world of work than their female counterparts. Simply put, girls must see themselves as future wage earners. It is now imperative that special attention be given to our female students as they formulate their career and life options.

Stereotyped expectations and assumptions. In spite of the statistics mentioned above, many teachers and counselors base their academic and career expectations of students solely on the student's gender. Many educators still believe that females do not need vocational courses that have been traditionally for males. Yet when girls are channeled out of classes such as electronics, their career options are significantly lowered. Clearly, stereotyped expectations are not only unfair, they are also unrealistic.

A particular problem is boys' attitudes towards their female counterparts in nontraditional classes. Studies have shown that boys have stronger feelings than girls have regarding what interests are "proper" for a female to pursue. Educators must take it on as their responsibility to counteract sexist attitudes of their colleagues and their students.

Lack of experience outside the classroom. Stereotyped play and hobbies in which girls engage outside of school often do not promote or use skills that are later useful in industrial arts, vocational, and electronic courses. These skills include spatial visualization, or the ability to imagine objects and mentally move or make changes in those objects; the use

of manipulatives and tools; and risk taking. Further skills that "girls" play does not often reinforce are multi-step problem solving (that is, solving problems which bring in one or more variable), estimation and cooperative work. Playing with blocks, chemistry sets, and car motors helps boys develop these skills which later prove to be useful.

Goal #1 Increase career awareness among female students.

Objectives:

I. Have students meet, firsthand, with women who are in nontraditional careers.

II. Infuse career education regarding females into the classroom.

Procedures and Activities for Meeting Objectives:

I. In order to have students meet women who are in nontraditional jobs, teachers and counselors could:

A. Invite women to speak to classes. Women are often eager to share their enthusiasm for their career field with younger females. Students can ask the speakers a variety of questions, including what the advantages and disadvantages of particular career fields are, what the salary range, is, what kinds of training and education are needed, and what it is like to be a pioneer in a "man's" world. Speakers can also take the opportunity to describe their job to classes, filling in vacant pictures that students often possess regarding what people actually do on the job. Guest speakers are also able to explain other jobs in their field, thereby exposing the students to a range of jobs in the electronics industry. Women speakers can be located through personnel offices of

local businesses, professional organizations, union halls, and other community-based groups.

B. Arrange individual career explorations to job sites for students. Often, the same women who volunteer to speak to classes are also willing to have students visit them at their job site. In this way, students can get a greater appreciation for a particular job. Students can use the explorations to make in-depth contact with women mentors in electronic career fields. Students should visit the job sites prepared with questions for the women they will be meeting.

II. In order to infuse career information into the classroom, teachers can:

A. Use visual and audio-visual materials that depict accurate career information as well as portray women on the job. Please refer to the resource list for suggestions of such materials.

B. Use nonstereotyped simulation games and activities. One activity for younger students is to simply have them try to define certain job titles such as computer operator, computer programmer, electrical engineer, electrician, electronic technician, frame wirer, instrument mechanic, mechanical assembler and system analyst. Of course, career definitions should be free of gender bias. Publications from EQUALS of the Lawrence Hall of Science (see resource list) include other career activity suggestions.

Goal #2 Eliminate stereotyped expectations and assumptions.

Objectives:

I. Teachers will take an active role to encourage females to enroll in electronic and other nontraditional vocational courses.

II. Electronic classes will present an atmosphere that is inviting and comfortable for young women.

Procedures and Activities for Meeting Objectives:

I. In order for teachers to take an active role in encouraging females to enroll in electronic and other nontraditional vocational classes, they can:

A. Personally invite girls to visit electronics classes, so that they can observe firsthand what is involved. Personal outreach from teachers makes students feel comfortable and wanted.

B. Visit other classrooms and feeder schools to encourage girls to enroll in electronics classes.

C. Develop a fun, short and informative general assembly program to attract students, particularly girls, to their courses.

D. Enlist building colleagues to identify girls who might be interested in electronic classes. In this way, students who might not know about the opportunity to enroll in the classes, or who may not have considered enrolling can be singled out by nonindustrial arts teachers who have them in their classes.

E. Use females who are enrolled in electronics classes to recruit others to those classes. This is an excellent method for increasing the number of nontraditional students.

II. In order for electronic classes to present a comfortable and inviting atmosphere for young women, teachers should:

A. Use promotional literature that is free of sex bias, includes pictures of girls, and avoids the generic use of "he" as much as possible.

B. Review instructional materials. Often, due to budget constraints, biased materials have to be used for a number of years before they can be updated or replaced. Teachers should, therefore, try to counter any biased materials that they may be forced to use. One good way of doing this is to occasionally take some class time to point out sexism in texts and to make the point that vocational fields, including electronics, need no longer be exclusively the domain of one sex or another.

C. Actively counter peer pressure against girls' enrollment in certain courses. Educators should demonstrate to students that they have the same expectations of both sexes and that they will not tolerate behavior from students that is inconsistent with those unbiased expectations.

Goal #3 Counter the lack of experience that girls may bring to the classroom.

Objectives:

I. Help to develop skills that those who avoid electronics and industrial arts classes may not possess.

II. Build interest on the part of females in electronics and traditionally male vocational courses.

Procedures and Activities for Meeting Objectives:

I. In order to help develop spatial skills, problem solving skills, and tool familiarity, teachers could:

   A. Emphasize geometric and spatial exercises. A few examples are using small blocks to help students visualize three dimensional objects, working with optical illusions, and doing topological map work.

   B. Do problem solving activities in the classroom, encouraging students to look at situations in creative and different ways, to think logically and to be able to sort out the variables.

   C. Incorporate activities which will, in a nonthreatening manner, help all students become familiar with electronic terms and tools. Teachers should assume nothing regarding students' familiarity of such things. (Please refer to the appendix for an example of an appropriate activity for helping students learn about tools and equipment.)

II. In order to develop interest on the part of females in electronics, schools can

   A. Require exploratory combination courses for all students at the 7th through 10th grade level. Such courses could include shop and electronics along with home economics and other exploratory classes. Requiring all students to take these classes insures that both boys and girls are exposed to certain concepta at a fairly early age.

   B. Incorporate hands-on, manipulative tasks in K-8 classes. Such activities help students move from the concrete to the

abstract in their learning. Such courses as electronics, consequently, don't seem so threatening.

C. Encourage cooperative efforts that will result in a nonthreatening environment. In this way, girls will begin to take risks, experience success and develop a positive attitude toward the study of electronics.

Name:

MOVIN' AROUND — Study Sheet

Directions:
Choose an appropriate tool for each job from those shown on the attached page. Write the names of the tools in the blanks.

Ginny and Joe went with their Aunt Rose to the construction site of a new shopping center. Aunt Rose is a supervisor for the general contractor who is building the shopping center. She was very much interested in building as a child, studied math all through school, took courses in drafting and architecture in college, and later went to work in the building trades. She wanted Ginny and Joe to learn about her work.

The first site they visited will be a pet shop when it is finished. The plumber was working on the piping for the fish tanks. She was holding one pipe in place with a large _____ _____ while using another one to tighten a fitting. She had to cut a pipe to a certain length to fit under the fish tank, so she used a _____ _____ to measure it, then cut it with a _____ _____.

Next, in what would be a clothing store, frames for displays were being built by carpenters. They were using _____ to pound nails into boards they had cut with their electric _____ _____.

As soon as the carpenters had finished, an electrician drilled holes in the frame with her electric _____ so that the wiring for the display lights could pass through the frame. Her partner used screws and a _____ to fasten the switch boxes into place when the wiring was completed. The wires had to be squeezed together with a pair of _____ before being capped off to make them safe.

Two shops away, cabinet makers were sanding cabinets with electric _____ to make the surfaces smooth for painting. They had set up a workbench with a bench _____ on it to hold small pieces of wood they needed to cut to a particular length. Once, when all the electric saws were being used, the cabinet maker used a _____ _____ to cut a wooden brace, holding it in the vise while he cut it.

Out in the mall area, a forklift, which was being used to haul tools and lumber, had stopped running. A mechanic was working on it, with his _____ spread about him on the floor. Several workers could not wait for the forklift to deliver what they needed, so they used a _____ to carry their supplies.

A large appliance store was almost finished, and a refrigerator was being brought in on a hand _____ by a worker who liked to balance the load just right. He almost ran into Ginny because he couldn't see around the big refrigerator.

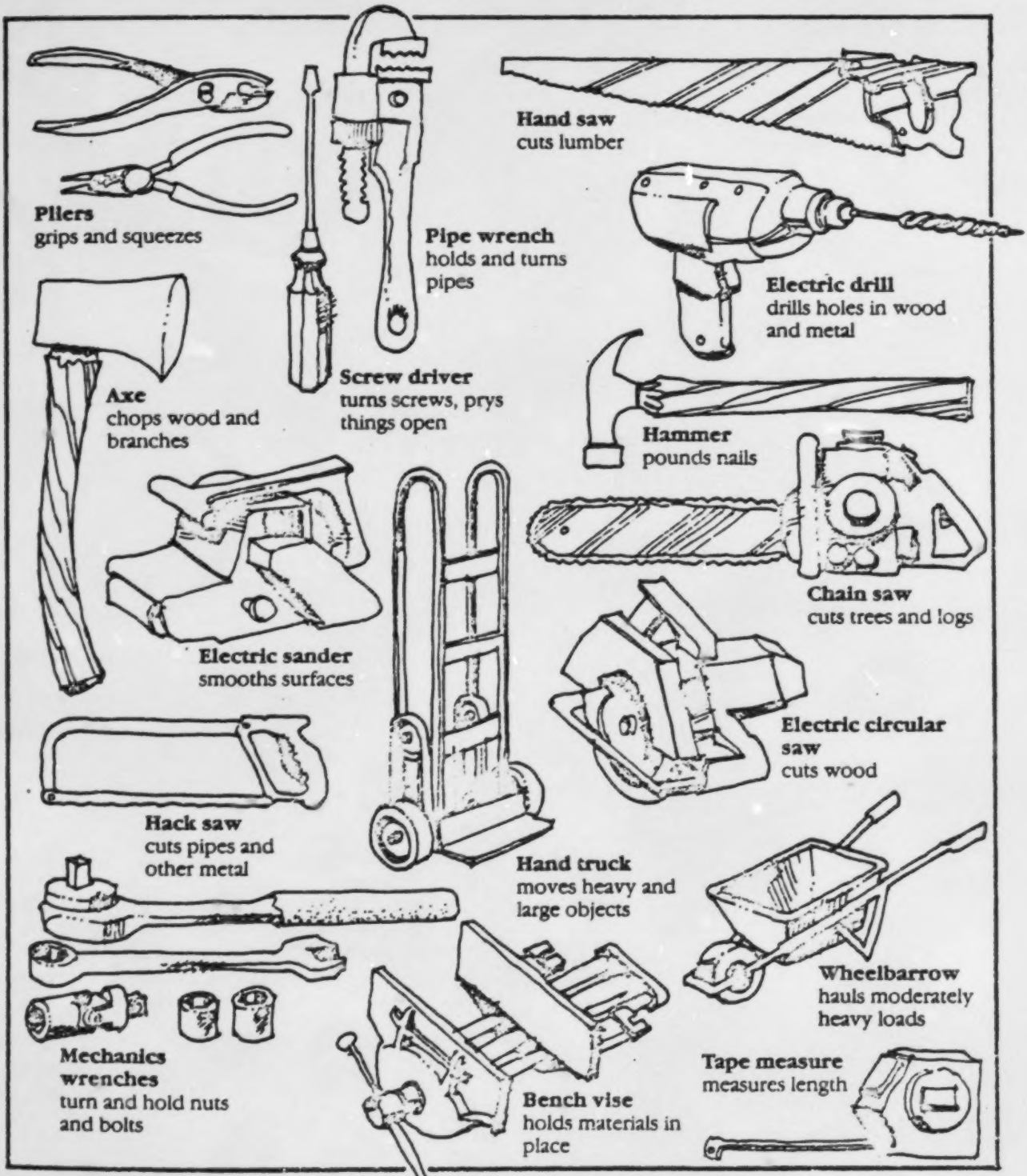
Joe and Ginny were getting hungry, so Aunt Rose offered them lunch at a nearby hamburger stand. On the way out of the shopping center, Joe noticed that a tree had been blown down nearby, perhaps during a recent windstorm. Workers were using _____ _____ to cut up the large trunk into small pieces. Others were using _____ to chop off some of the very small limbs.

After lunch, Aunt Rose took Ginny and Joe home. Their mother was busy rewiring the electric plug for the toaster, and she suggested that Ginny and Joe apply their knowledge immediately by using the lawn mower to cut the grass!

BEST COPY AVAILABLE

Name:

TOOLS



From SPACES, EQUALS Program, Lawrence Hall of Science, Berkeley, Ca.

SEX EQUITY RESOURCES

American College Testing Program (ACT), Women in Science and Technology, 1976.

The Boston YWCA, Connections: Women and Work and Skills for Good Jobs. Education Development Center, 55 Chapel Street, Newton, Massachusetts 02160.

Downie, Diane; Slesnick, Twila; and Stenmark, Jeankerr, Math for Girls and Other Problem Solvers. Lawrence Hall of Science, University of California, Berkeley, California, C1981.

Fraser, Sherry, Solving Problems of Access to Careers in Engineering and Science. Lawrence Hall of Science, University of California, Berkeley, California, C1982.

Hamar, Rosalind; Hunter, Andrea; and Moore, Madeline, Women in Nontraditional Careers, (Winc) Curriculum Guide. Portland, Oregon, Northwest Regional Educational Laboratory, 1982.

Lederer, Muriel, Blue-Collar Jobs for Women. New York, Dutton, c1979.

Matthews, Martha and McCune, Shirley, Try it, You'll Like it! A Student's Introduction to Nonsexist Vocational Education. National Foundation for the Improvement of Education, Washington, D.C.

Wetherby, Terry, Conversation: Working Women Talk About Doing a "Man's Job". Mill Brae, California: Les Femmes Pub., c1977.

SEX EQUITY RESOURCES

Freedom Training. 16mm film, 22 minutes; interviews different students involved in nontraditional vocational courses (boys and girls). Indiana Career Resource Center, 1205-09 South Greenlawn Avenue, South Bend, Indiana 46615.

Good Work, Sister! Slide-tape show, 20 minutes; documents story of women shipyard workers during World War II by using excerpts of oral interviews of former Portland area shipyard workers and old photos. Northwest Women's History Project, P.O. Box 5692, Portland, Or 97228. $150.00.

It's Her Future. 17 min., sd., color, 16mm. Investigates parental attitudes toward their daughters' educational pursuits, pointing out that parental opinion is a key factor in sex role stereotyping at the vocational education level. Shows that the overwhelming majority of female students are enrolled in programs leading to traditional female occupations. (National Audio Visual Center, National Archieves and Records Service, General Service Administration, Washington, D.C. 20409)

Other Women, Other Work. 20 min., sd., color, 16mm. Presents vignettes of a number of women who are dedicated to changing attitudes toward women's work. (Grades 9-12) (Churchill Films)

When Are We Ever Gonna Have to Use This? Poster. Terrific chart depicting what math skills are used in different occupations. There are 100 occupations listed, including contractor and electrician, electronics technician and electricial engineers. Dale Seymour Publications, Box 10888, Palo Alto, California 94303.

Women in Nontraditional Careers (WINC). Posters. Series of 18 Posters which depict women in various jobs including carpenter, electrician, welder and others. $20 from Northwest Regional Educational Laboratory, 300 S.W. 6th, Portland, Oregon 97204.

HORIZONTAL ARTICULATION MAKING BASIC SKILLS REAL, PRACTICAL AND FUNCTIONAL FOR VOCATIONAL STUDENTS

Horizontal articulation between academic and vocational classes is a subject that receives little attention in most secondary environments.

A successful working model for this coordination exists at Cleveland High School, Portland, Oregon in the Metals Cluster. Math and English teachers work closely with the Metals Vocational instructor to provide practical application of academic skills. The program has worked successfully for several years and has proven that it is a sound method to assist our students to gain employment skills. We present this as a model which can be applied to any subject area.

CLEVELAND HIGH SCHOOL

METALS CLUSTER PROGRAM

The Metals Cluster is a two-year program which meets two hours each day. It is designed for those individuals who plan to enter the metals trades. The program includes English and math courses related directly to the metals laboratory activities. Students are involved in all aspects of metal work including major sheet metal construction, advanced welding and cutting techniques, and precise machining operations. This program prepares student with entry level skills leading to employment in the metals trade upon graduation.

Advantages of this cluster training program are:

* Pre-job training and skills
* Earn money while learning
* Practical math and English skills
* Help in finding part-time work
* Job and school coordination

The vocational metals class is the hub of the program. Both the English and math portions are support disciplines to the metals lab.

ENGLISH CLUSTER:

Students study only practical, job-oriented curriculum in the English class. Besides the usual basics such as spelling, punctuation, capitalization and the usual writing concomitants, much emphasis and time is given to job applications, resumes, interviews and the small amenities that make job searching successful.

Interaction with the shop teacher is constant, so that technical packets which must be read for shop skills and safety are often the academic

instructor's responsibility. This cooperation is essential and makes English meaningful to the vocational student. Since the shop teacher runs the cluster, if he decides student's penmanship needs work, students practice penmanship -- it is this communicaton which keeps a bond between the English and shop class structure.

Attendance and tardiness are of crucial importance to develop a disciplined vocational student and these attributes are emphasized -- no student passes who has poor records -- and some students show remarkable progress in the area.

Since class emphasis is limited as previously explained, almost all work is done in class to insure that everyone understands. An English handbook (Handbook of English, I) is used for drill exercises and brief homework assignments (20-minute maximum). Such exercises are corrected the following class period and discussed. Activities include lectures, boardwork, discussions, and quizzes. Literature is reading aloud to the class from a realistic novel while members follow their books at the desk. The instructor does the reading and explains any troublesome words and situations. Many of these students are poor readers so this helps their word recognition and comprehension. The books are kept in the room; about 20 minutes of each class period is devoted to reading.

A significant program success factor is three compatible teachers with one being the leader and decision-maker -- in this case the shop teacher. The lead teacher determines the schedule and any specific problems that should be addressed. The program keeps a large number of students in school who might be frustrated and drop out.

The students come for math one period out of the time allotted to the cluster. The instructor relates this type of math directly to the metals

trade. For instance, the instructor uses the invoices from orders for material that the metal shop teacher gets. In that way the student works on practical material. The instructor also has the student figure costs of making metal objects such as auxiliary gas tanks for trucks, lengths of straps to hold round gas tanks in place, how much gas a round or rectangular tank holds, etc. These are things a metal worker might run up against in a shop situation.

Some of the activities the instructor uses to provide a good mathematical background are: reading meters such as electric, vacuum gauges, tachometer, and gas; reading graphs such as bar, broken line, curve-line; working with linear measurement such as machinist's steel rule, steel tape, circumference rule, 2-ft. steel bench rule; blueprint reading, technical drawings, dimensions, angles, three view relationships working with fractions, adding, subtracting, multiplying and dividing, working with decimals - all four functions - working with percents as we figure wages, wage increases, cost of living, borrowing money, etc. Students work with equations and the formulas that are used in industry. Some of the favorite formulas the students work with are auto-related. Some examples are figuring horsepower displacement, rear end ratios, gears and pulleys that are relative to speed of motors in relationship to speed drill presses, lathes and milling machines.

The program needs the type of students who can experiment and work out problems with the right direction. They need to be somewhat serious about their future, as far as earning a living, and be able to take constructive criticism and get on with their work. The three instructors have frequent meetings about how things are going in general. At these meetings the

progress of each student is discussed. For instance, can a particular student measure accurately enough to produce a product that would need accuracy to a 1/64" or maybe to a thousandth of an inch? In these formal meetings the three instructors may list each student and discuss the type of work he/she would be recommended for in the metals trade. The combined experience of the instructors makes it possible to come close to predicting the student's success rate in the field. Other times the meetings are more informal when internal problems of the cluster are discussed or how to update the curriculum. It is important that the cluster class remain flexible at all times.

Metals Cluster Lab:

The metals instructor needs to present a general overview of the metals area. The metals section needs to be an interesting lab experience. The student should be aware of the following:

A. Safety practices
B. Punctuality
C. Planning ahead
D. Always keeping busy
E. Proper attitude
F. Money responsibilities
G. Good workmanship
H. Proper metals practices and procedures

The metals lab instructor should guide the students through the different areas and try to make the experience as interesting as possible.

The material used by the student should be as inexpensive as possible which means the teacher needs to follow all possible leads to inexpensive or donated materials. The student has to be made cost-conscious also.

Field trips should be used to help present some of the areas. Many different industries are happy to present their areas to interest young people. The class has visited the air industry, the foundry industry, and welding and machine shop areas.

Audio-visuals are an important aid in presenting the metals areas. Students are also shown many safety films for protection purposes.

Guest speakers are asked to come in to give presentations on trade schools, unions, etc.

The use of individual lesson plans keeps all the students busy during the shop hours and students can progress at their own speed.

A regular routine is important. There should always be a time for a group discussion every day. Clean up is an important part of any job. A changing student controlled shop clean up program seems to work best.

Positive outcomes:

A. Improved chance of employment
   1. Upgraded skills
   2. Some students who might drop out are retained and graduate
   3. Broader knowledge in area
   4. Some jobs obtained through the cluster during high school are becoming full-time jobs

B. A broader understanding of the world of work

C. The closeness of a tight group that is a challenging experience

Implementing the model:

Some of the most important factors that contribute to a successful cluster seem to be:

A. The proper personnel (teachers)
   1. Must get along very well
   2. Must understand the needs of the lab teacher
   3. Must be flexible
   4. Must have a broad knowledge of their area
   5. Must be able to work with the student who is attracted to this particular career area

B. Necessary administrative support
   1. Appropriate vocational education student/teacher ratio
   2. Adequate funds to run such a program
   3. Teacher directed schedules
   4. The teachers and counselors involved in such a program should be able to decide who stays and who goes. This imposition of standards is crucial in an industry-based program.

C. Class schedule
   1. Early morning is a good time
      a. Students have to get up (like a job)
      b. Possible to have a job in afternoon

D. Good facilities
   1. Room for expansion

Type of student -- prerequisities:

The students should be:

A. Interested in the career area

B. Able

1. Physically

2. Mentally

C. Proper attitude

D. Willing to work and learn

Curriculum prerequisties:

A. At least one year of experience in basic metals class -- or a very, very good learning experience at home (family business, etc.)

B. Basic math

C. General science

D. Basic reading and writing skills

Cooperative Work Experience Component of the Metals Cluster Program:

Many of the students participate in co-op work experience at an approved work site. The work experience helps students relate study in school with a job in the metals area based on the student's interests and career objectives. Students will spend approximately ten to fifteen hours per week at the training site and will earn one credit per semester towards graduation if all assignments are completed satisfactorily.

Advantages for Student of the work program:

1. The student has an opportunity to learn and develop proper work habits and attitudes.
2. The job can be a "school of human relations" through firsthand experience with other employees.
3. Working provides an income while learning educational and technical skills.
4. Participation earns credit toward high school graduation.

5. The job site provides a laboratory for developing marketable skills.
6. The experience gives practical value to theoretical knowledge presented in the classroom.

Student Responsibilities:

1. Maintain regular attendance on the job and in school, and notify the employer of any necessary absence.
2. Respect the supervisor and accept criticism as an aid to learning.
3. Accept responsibility; be honest and dependable.
4. Be a loyal employee to the employer and firm.

Advantages for Employer of the work program:

1. Gives an opportunity to screen and select employees for permanent employment after graduation.
2. Builds good public relations through business/school cooperation and an important public service.
3. Supplements the staff by providing a part-time employee to assist in the workload.
4. Becomes a partner in selecting, instructing and training young workers in the skills and understanding needed for effective job performance.
5. Participates in keeping classroom instruction consistent with current trends in business.
6. Notifies the coordinator of major difficulties, thereby relieving employers of some of the guidance and counseling problems.

Employer Responsibilities:

1. Interviews and screens students provided by the school.
2. Evaluates the student periodically.

3. Pays the student an agreed upon wage, and provides for salary increases if and when merited.

Advantages to the school of a co-op work experience program:

1. Enlarges the learning facilities available to the student.
2. Brings business, industry, and the school together in an effort to develop a strong, useful career education program.
3. Gives the school a means of evaluating its instructional program to effectively prepare students for the job.

School Responsibilities:

1. Provide qualified personnel to administer the program, coordinate student jobs with the school programs, and to counsel students in areas relating to the world of work.
2. Coordinate with the employer so that work done by the student is an asset to the employer as well as a learning experience for the student.
3. Keep the instructional program up-to-date to meet the current trends of industry.

Conclusion:

A program of this type can only function effectively with continuous interaction between counselors, administrators, parents, students, instructors and job supervisors. An advisory committee composed of these individuals should evaluate the program each year and recommend changes when necessary to meet the needs of the students.

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Project Resources

1. Methods and Materials for Teaching Occupational Skills, Illinois State Board of Education August 1978, University of Illinois, Department of Vocational and Technical Education.

2. Women in Non-Traditional Careers Book - 1980, N.W. Regional Education Laboratory, Portland, OR.

3. Portland Public School Curriculum Guides - Area III
   A. Career Education - Work Experience - 1973
   B. Career Exploration - 1974
   C. Career Exploration - 1975
   (Portland, OR)

4. Rivergate Career Education Project - 1974, ESEA Title III, Oregon Board of Education, Portland Public Schools, Portland, OR.

5. Oregon Survival, Betty Hall-Colin Dunkheld, Holt, Rinehart, Winston Pub., New York, 1979.

6. Coping in the World of Work - Practice in Problem Solving, Center for Vocational Education, Ohio State University, 1960 Kenny Rd., Columbus, Ohio, 43210-1977.

7. Idea Book - Meeting the Occupational Needs of Disadvantaged Youth - 1981, N.W. Regional Educational Laboratory, 300 S.W. 6th, Portland, OR 97204.

8. Vocational Education for Mentally Retarded Students - A Procedural Manual, Vocational Technical Education Division, School of Education, Oregon State University, 1978, Corvallis, Or.

9. Dictionary of Occupational and Educational Information Sources - 1980, Oregon Occupational Information - Coordinating Committee, 875 Union St. N.E., Salem, OR 97311.

10. Career/Vocational Guidance Competenties for Educators and Community Resource Personnel, Idaho Department of Vocational Education, University of Idaho, O. E. Kjos, Project Coordinator.

11. Career Exploration Guides - 1979, Portland Public Schools - Area III, Human Resources Bureau - City of Portland.

12. Oregon Guide to Apprenticeship, State of Oregon, Employment Division.

13. What Color is Your Parachute, Richard Bolles, Ten-Speed Press, March, 1981. Rev. ed. April 1983.

RECOMMENDED CAREER WORK EXPLORATION STRATEGIES

FIELD TRIPS

Goal: Field trips with an emphasis on Career Exploration will be taken by students at each grade level, (7 through 10).

Concepts:

1. Field trips are an important way to give students exposure to people in real life work situations.
2. In grade 7, exposure should be of short duration and cover a wide variety of occupations.
3. As the student progresses through the exploratory program, the exposure to a wide variety of occupations should be narrowed to those of the students prime interest. The time spent on exploring this chosen number of occupations should increase.

Objectives:

Through field trip experiences, the student will:

a. Observe the variety of jobs within the industry or business visited.
b. Observe and be able to identify jobs relating to people, data, or things within the business or industry visited.
c. Observe and be able to identify the health, safety, and grooming standards required by the business or industry visited.
d. Observe the dignity of work within a variety of occupational and economic roles.

Every student upon the completion of the 7th grade will have had at least five on-site job observations.

Every student at the completion of grade 8 will have participated in planned field trips to observe representative occupations in the community, and will have had at least five on-site observations.

Every student at the completion of grade 9 will have explored business representing a variety of industries to become aware of job opportunities, employment trends and projections. The student will have had at least five on-site observations, and have had a minimum of 25 hours of hands-on work experience.

Every student at the completion of grade 10 will have had at least five on-site job observations and have had a minimum of 30 hours of hands-on work experience in a career of his choosing.

** A FLEET OF MINI-BUSES IS RECOMMENDED TO PROVIDE TRANSPORTATION TO AND FROM THE SITE LOCATION.

Career Exploration Guide

Portland Public Schools - Area III - 1975

RECOMMENDED CAREER EXPLORATION RESOURCES

1. Newspapers
2. Industry
3. Occupational briefs
4. Oregon cluster guides
5. Students' vocational interest survey print-outs
6. Institute for Public Affairs Research (IPAR)
7. Publications:

   Occupational Outlook Handbook

   Occupational Employment Statistics for the State of Oregon, 1972

   Dictionary of Occupational Titles -- Vols. 1 & 2
8. Test: JOB-O, GATB, OIAS
9. Oregon Board of Education, "The Oregon Way" career education program

CAREER EXPLORATION EQUIPMENT & SUPPLIES

Each school will need audio-visual equipment such as the following:

1. Film loops: Encyclopedia Britannica film loops
2. Tapes: "World of Work"
3. DuKane combination projector (see the Audio-Visual Director at the administration building)
4. Job kits - (J.C. Penny's, OIAS, "World of Work")
5. SRA kits
6. Computer terminals
7. Applied Technology Kit - "Search to $ucce$$"

CAREER EXPLORATION FACITLITES LOCATED WITHIN THE SCHOOL

1. Career Education Center
2. School library
3. Counseling department
4. Teacher - Coordinator; classrooms

CAREER EXPLORATION RESOURCE PERSONNEL

1. Employment specialists
2. Placement agency employees
3. Military personnel
4. Union apprenticeship training personnel
5. Parents with special skill or work backgrounds who would be willing to share their experiences or job responsibilities by talking to students
6. Representatives from those agencies where students are placed
7. Apprenticeship information personnel
8. College and trade school, business school or other para-professional training schools which would relate to the students' needs and interests
9. Local citizens who work as volunteers in non-profit agencies
10. Business personnel who are employed in profit or non-profit organizations

RECOMMENDED OUTLINE FOR SPEAKERS GUIDE

SPEAKERS

GOAL: Speakers with a career emphasis will be used as a means of career exploration at each grade level.

PURPOSE: Provide a common outline for resource people.

1. Indicate the career cluster category in which your specific job applies.
2. Briefly list the various individual jobs and their work functions and each income range.
    a. Entry level educational requirements
    b. Advancement opportunities
    c. Post-employment education opportunities
        1. On-the-job training
        2. Personal improvement
        3. Special educational program
    d. Sources of career opportunities
        1. Government
        2. Private employment
    e. Trends and future opportunities
3. Specific considerations
    a. Working conditions
        1. Advantages
        2. Disadvantages
        3. Hours, (shift hours, etc.)
    b. Memberships
        1. Unions
        2. Professional

c. Benefits

1. Employer (Credit Unions, Educational programs, retirement, medical, vacation pay, coffee breaks)
2. Industry (relates to industry-wide benefits)
3. Trade or professions (relates to specific benefits not offered by the employer)

4. Employer-employee expectations
   a. Dress and appearance
   b. Responsibility and authority
   c. Attitude and mutual respect
   d. Interpersonal relationship
5. Use of tools, uniforms, special hardware or software as a part of the presentation.

CAREER EXPLORATION GUIDE

PPS - AREA III - 1974

MATH AND SCIENCE CAREER EXPLORATION MINI-COURSE

Step 1 Have each student or group of students select an electronic career or occupation.

Step 2 Identify the type of math and science courses necessary for success in that occupation by utilizing the

A. Dictionary of Occupational Titles.

B. Occupational Outlook Handbook.

C. CIS.

Step 3 List electronics occupations that require major math and science backgrounds and list electronics occupations that require minimum math and science courses.

Step 4 Contact Oregon ABLE (or a similar community resource bureau) to arrange for field trip, guest speakers, or individual vocational visits.

Step 5 Have students do a self-analysis to determine the math and science courses needed to reach their occupational goal and write a forecast plan explaining how they will reach goal.

PERSONAL APTITUDE EVALUATION

Answer the following questions:

1. Which aptitude factors do you think you are strong in?

2. Which aptitude factors do you think you are weak in?

3. Which aptitude factors do you think you need to be a success in your chosen field?

4. In what aptitude factors do you need to improve upon in order to perform well in your vocational field?

5. How can I improve upon the aptitudes I need for my vocational choice?

6. Which aptitude factors do not play an important role in your chosen occupation?

7. Why are aptitudes so important in an occupational choice?

8. What decisions must you make if you lack the necessary aptitudes in your chosen occupation?

MATCH THE DEFINITIONS

Match the words on the left by placing that number on the line next to one of the meanings on the right.

1. Verbal	_____ ability to see differences in colors
2. Numerical	_____ coordination of hands and eyes
3. Spatial	_____ ability to see differences and mistakes in written materials
4. Form Perception	_____ ability to understand and use words and ideas
5. Clerical Perception	_____ ability to move and work with the fingers
6. Motor Coordination	_____ general learning ability
7. Manual Dexterity	_____ ability to see and compare the different shapes of objects
8. Finger Dexterity	_____ ability to solve problems and use fingers
9. Eye-Hand-Foot Coordination	_____ ability to work with hands easily and skillfully
10. Color Discrimination	_____ ability to move eye-hand-foot in response to what is seen
11. Intelligence	_____ ability to reorganize and match various forms

Career Exploration Guide

PPS - Area III - 1975

MINI-EXPLORATION PROGRAM

Step 1 Selection of Students

A. Establish selection criteria for program.

B. Determine student's interests - complete pre-exploration tests.

C. Complete necessary paperwork for classroom release - make note of student's schedule.

Step 2 Community Evaluation

A. Identify electronic firms in area.

B. Contact public affairs or community affairs department to determine if on-site visits are possible.

C. Establish list of possible field trip sites or individual exploration sites.

Step 3 Placement/Exploration Phase

A. Arrange field trip - set up visit to business, reserve bus, collect completed field trip slips.

B. Arrange individual occupational visit - notify student as to time-date-location of visit, assist student in developing questions for visit, obtain parental-teacher approval.

Step 4 Follow-Up

A. Have students complete field trip questionnaire or individual visit evaluation.

B. Discuss results of trip and assist student in career planning.

SPECIAL EDUCATION MINI-COURSE

(Recommended for grades 9 and 10)

When teaching career education to special education students, it is of primary importance that each student is able to realize their full potential, regardless of the handicapping condition.

Day I:

Each student will fill out and complete Social Security Card and Work Permit applications.

Day II:

Students will select three broad areas of employment in which they might be interested. Use Resource Center for materials.

Day III:

Discuss job possibilities in each of the areas they selected. Instructors will emphasize qualifications for each job.

Day IV:

Film: "The Job Interview" - Discuss filmstrip. (25 minutes, color w/record)

Day V:

Continue discussion of film. Use the "World of Work" tapes. Emphasize neatness of dress, language, and skills.

Day VI:

Fill out employment application. Distribute employment interview cards.

Day VII:

Continue with employment applications. Emphasize neatness, pertinent courses taken in school.

Day VIII:

Conduct mock interview and discuss. Refer to "The Job Interview" and "World of Work" tapes.

Day IX:

Each student selects five local businesses where possible employment opportunities exist. Arrange for field trip visitations.

Day X:

Continue with employment selection. Also discuss mode of transportation to and from interviews.

TEACHING TECHNIQUES FOR SLOW LEARNERS

Many suggestions have been made regarding specific techniques that teachers of slow learners should use. The ones most frequently mentioned follow:

1. Simplify activities because these students cannot see as far ahead as others; shorten in length and narrow in scope.
2. Set up plans that are clear, definite, and precise.
3. Make relationships obvious.
4. Use demonstrations generously, making them concrete and tangible rather than verbal and abstract; include illustrations, audio-visual aids, field trips, and direct experiences.
5. Use drill and practice, but not meaningless rote or repetition; quantity without quality is futile.
6. Evaluate frequently and reassure often to help compensate for past frustrations, but give praise only if earned.
7. Develop "pride in outfit," in accomplishment, and in appearance.
8. Stress the practical and the immediately meaningful, such as current happenings at home, in school, in the community, and in world affairs.
9. Capitalize on individual abilities, such as those of an athletic, mechanical, social artistic, or other nature; encourage creative ideas and interest or hobbies.
10. Refrain from undue pressures.

11. Use procedures that encourage student expression, including teacher-pupil planning and group processes in classroom activites.
12. Seek and bring out vocational ambitions that are realistically founded.

PROCEDURES

SPECIFIC HANDICAPS	SUITABLE OR APPROPRIATE JOBS
Deaf	1. Any job in electricity and electronics if written instructions are provided or if a "signer" is available to explain. This would pertain to any level of employment assuming that the student had the required level of ability and/or education.
	2. More and better instruction needs to be provided to students for speaking. This must be done on the pre-school and beginning school level so that students do not learn to rely on sign language. It is extremely difficult for a deaf student to learn to speak and if they learn to use sign they generally tend to "get by."

***

Visually handicapped	1. Very few jobs available or possible because of the necessity of accuracy. 2. Possibly sorting parts of minor importance. ***
Retarded	1. Depending on the severity of retardation: Severely handicapped - simple repetitious wiring of circuit boards, parts sorting, soldering of very simple circuit boards (this is being done by machine more and more now). Very low average - all of the above but on a slightly more difficult basis. ***

Limited English Speaking Students	1. Limited English speaking students generally encounter fewer difficulties in entering electronics classes than other disadvantaged or handicapped students. All levels and all jobs available depending on ability and desire. Limited English is only a very temporary handicap which may be compensated by math ability or education received elsewhere plus motivation. Specific recommendation: intensive use of an interpreter plus diagrams in preliminary skill instruction.

***

Strategies for training and placing disadvantaged students on jobs:

The following changes or strategies are suggested for disadvantaged student instruction:

1. Early career exploration
2. Superior teacher-student ratio in industrial arts in middle schools - on occasion one-on-one.

3. Restricted class size in high school--and do NOT mix deaf, learning disabled, emotionally disturbed students with limited English students.
4. Secure "on sight" practical training site and/or if possible, establish a district training site for electronics.

CHARACTERISTICS OF THE DISADVANTAGED AND HANDICAPPED THAT AFFECT LEARNING

The first requisite for planning effective instructional strategy is an understanding of the trainee. Instructors must recognize that disadvantaged trainees have both positive and negative characteristics. The perceptive instructor will recognize these and will captialize on them in planning and executing his instructional strategy.

Some of the more prevalent characteristics and methods of working with disadvantaged trainees, to meet their speical needs, are described in the following categories. It should be recognized that a trainee manifests one, often more than one, and sometimes all of the following characteristics. It should also be recognized that the following list is limited to some of the more prevalent deterents to learning.

CATEGORY	NEGATIVE CHARACTERISTICS	NEUTRALIZER	POSITIVE CHARACTERISTICS	NEUTRALIZING METHODOLOGY
I.	They may be apprehensive when they enter the training environment which differs significantly from their home background.	A.	They have a capacity for close and loyal personal relationships, especially with peers.	1. Do everything possible to eliminate fear and anxiety. 2. Display a "I'm here to help you" attitude. Maintain a horizontal relationship with trainee. 3. Relationship should be: This: Instructor-Trainee Not this: Instructor | Trainee 4. Be sensitive to trainee problems. a. Offer praise when it is earned. b. Capture every opportunity to encourage trainee. 5. Learn trainee's name at first contact. Be consistent in your personal reference to each trainee (first name, last name, etc.)
		B.	A positive mutual respect will evolve when an instructor succeeds in winning their confidence and trust.	
		C.	They have the inate ability to very quickly detect insincerity.	

CHARACTERISTICS OF THE DISADVANTAGED AND HANDICAPPED THAT AFFECT LEARNING

CATEGORY	NEGATIVE CHARACTERISTICS	NEUTRALIZER POSITIVE CHARACTERISTICS	NEUTRALIZING METHODOLOGY
II.	They may lack self-confidence due to failure syndrome.	A. They are stimulated by successful experiences. B. Most are capable of working well and hard on a specific task which has purpose and utility for them.	1. Give recognition. 2. Provide for success by establishing a series of short attainable goals. 3. Give trainees increased responsibility as they demonstrate that they can assume it.
III.	They may become bored easily and have short spans of attention.	A. They are creative, motivated and proficient in areas where their interest lies. B. It requires less stimulation for them to become motivated than for "normal" students	1. Relate the utility of experience to which the trainee is exposed, to some occupational or life need. 2. Vary both assignments and teaching methodology often. 3. Strive to involve trainees in planning and executing assignments. 4. Demonstrate often: a. Utilize and vary teaching aide. b. Make each step clear and logical (as they view it). c. Meaningful repetition. 5. Reinforce each experience with a practical application activity.

CHARACTERISTICS OF THE DISADVANTAGED AND HANDICAPPED THAT AFFECT LEARNING

CATEGORY	NEGATIVE CHARACTERISTICS	NEUTRALIZER	POSITIVE CHARACTERISTICS	NEUTRALIZING METHODOLOGY
IV.	They may not understand the relationship of school to long range goals.		A. They do not regard occupational training as degrading or representing a low status activity. B. They are more impressed by need for occupational training, thus enhancing motivation. C. They are more practical than abstract oriented.	1. Establish definite and intermediate goals. 2. Make sure that goals are clearly understood and satisfy present needs. 3. Utilize well prepared handouts prepared for current lesson and future referral.
V.	They may have work habits that may impede their employment and upward mobility.		A. They are very loyal to those they feel they can trust. B. They take great pride in carrying out responsibility they can adequately handle.	1. Help to develop acceptable job disciplines: a. Stress punctuality b. Good study habits 2. Develop routine for performing jobs or assignments. 3. When feasible, have trainees write down instructions. 4. Keep written assignments short and specific. 5. Develop ability to follow written instruction.

CHARACTERISTICS OF THE DISADVANTAGED AND HANDICAPPED THAT AFFECT LEARNING

CATEGORY	NEGATIVE CHARACTERISTICS	NEUTRALIZER POSITIVE CHARACTERISTICS	NEUTRALIZING METHODOLOGY
VI.	They may have poor communication	A. They are very perceptive to non-verbal communications. B. They are very articulate in non-standard English.	1. Provide related materials correlated with occupational subject matter. 2. Imperative! Reading materials must be graded to their reading level. 3. Activities and materials that improve: a. Listening Skills b. Speaking Skills c. Writing Skills 4. Build technical vocabulary. 5. Familiarize yourself with speech communication techniques. 6. Group discussions to improve interaction skills. 7. Use tape recorders for feedback to trainees as to how they sound to themselves.
VII.	They may be poor readers	A. They have high interest in areas relevant to fulfilling their needs. B. Relate well to quick success factors.	1. Techniques to improve reading skills. 2. Practice in following written instructions and procedures. 3. Provide relevant materials about their occupational area or areas of interest. 4. Utilize materials developed for their age level. 5. Provide graded materials written at their reading level.

CHARACTERISTICS OF THE DISADVANTAGED AND HANDICAPPED THAT AFFECT LEARNING

CATEGORY	NEGATIVE CHARACTERISTICS	NEUTRALIZER	POSITIVE CHARACTERISTICS	NEUTRALIZING METHODOLOGY
VIII.	They may have personal habits and standards that may not be acceptable in business and industry.		A. They become very loyal and productive employees or learners when they are shown they are getting a fair shake. B. Can be very appreciative when Part A is prevalent. Many behavioral and emotional defects may dissipate when they realize a "square shake" is prevalent.	1. Provide activities that identify business standards. 2. Assist trainees to make self-analysis that identifies their training needs. 3. Role play activities that are relevant to business standards. 4. Develop activities that provide exposure to the business world. 5. Introduce the role of organized labor and its relationship to the trainee's occupational choice. 6. Provide an acceptable adult model. Practice what you preach.
IX.	They may have personality defects that affect employability.		A. Relate well with people who demonstrate <u>honest</u> concern.	1. Provide opportunities for group interaction and self-expression. 2. Provide for group and personal counseling. 3. Maintain contact with social service agencies for professional services.

CHARACTERISTICS OF THE DISADVANTAGED AND HANDICAPPED THAT AFFECT LEARNING

CATEGORY	NEGATIVE CHARACTERISTICS	NEUTRALIZER	POSITIVE CHARACTERISTICS	NEUTRALIZING METHODOLOGY
X.	They may have a lack of exposure to positive aspects of life.		A. Relate well to alternatives when they experience a better way of life. B. When exposed to more positive experiences, will assume some of these characteristics.	1. Don't be "preachy." 2. Provide proper adult model. 3. Arrange for positive exposure and experiences.

NOTE: The above is not proposed to be an exhaustive list. It is recommended that you respond to these as a point of departure in becoming sensitive to the characteristics that might inhibit learning. You will note some repetition in the suggested methodology. You will also note some of the suggested methods may be adapted to any of the ten negative characteristics.

CO-OP WORK EXPERIENCE GUIDE

PLACEMENT, SUPERVISION, AND FOLLOW-UP SERVICES

Procedure

The placement, supervision, and follow-up of students should conform to the best interests of the student, the school and cooperating employer.

Involvement

The transition from school to work is a major adjustment for most young people. The teacher-coordinator and employer should work together to develop a plan to help the student-trainee adjust to his job. For example, before the student is sent for the job interview, he should be instructed about the job application, the interview procedure, and his responsibility.

When the student understands the nature of his responsibilities in the work-study situation, he should realize the importance and the relationship of his school work to job success. He should also understand the importance of supervision by his teacher-coordinator and his employer. Each assumes a vital role in the development of skills and understanding.

In the following phase of the cooperative work experience program, the teacher-coordinator should be concerned about the progress of the student-trainee on each job and what happens to him after graduation from high school. A good follow-up plan is very important in judging the effectiveness of the entire program.

Application

1. Interview Orientation--Proper orientation to employment interviews should be given before students are sent to be interviewed by prospective employers. Orientation instructions should include:

   a. Appropriate grooming

b. Courtesies to be followed when presenting a letter of introduction

c. Proper attitudes regarding employment and career goals

d. Questions to ask regarding the work to be assigned

2. Application Forms--Before the employment interview, students should be given instruction and practice in preparing job application forms.

3. Student Data--The employer should have all the information that he desires regarding the students sent for interviews. Information about their career goals, school attendance, scholastic records, and pre-employment courses completed will be helpful to the employer as he selects the student-trainee.

4. Student Interview--When possible more than one student should be sent to the employer for a job interview. Sending two or three for each job opening will provide important experience for each student and it will give the employer a chance to select the student who will best fit his situation. The final selection of the student is made by the employer.

5. Student Placement

a. The teacher-coordinator should send only those students to an employer who have the aptitude, interest, and ability to perform the work assigned.

b. If a student has been employed during the summer and wishes to remain with the same employer as a student-trainee, he should be permitted to do so if both he and his employer clearly understand the relationship of the in-school and on-the-job experience to his educational and career development.

c. The teacher-coordinator and the cooperating employer are responsible for the welfare and safety of each student-trainee. Therefore, the

work assigned should be in keeping with the regulations relating to the employment of minors. Information and rules and regulations are available from the Wage and Hour Commission, Oregon Department of Employment.

6. Training Plan--The teacher-coordinator and the employer should develop a plan for each student-trainee that outlines the kinds of instruction and supervision to be offered in the cooperative training period.
7. Teacher-Coordinator Visits--The teacher-coordinator is expected to visit each employer at least once each grading period to discuss the adjustment, performance, and progress of each student-trainee. Such visits should be more frequent if problems arise.
8. Student Evaluation
   a. The student-trainee should know the factors the employer or the supervisor consider when preparing the student-trainee evaluation form.
   b. An evaluation form should be prepared each grading period. This evaluation is an objective means of recording the student's performance and progress.
9. Follow-up--The follow-up of student-trainees should include the visits made while in school and also the record of employment and adjustment to full-time employment after graduation. Follow-up information can be used to determine the success of the program.

COOPERATIVE WORK EXPERIENCE

GUIDANCE AND COUNSELING FUNCTIONS

Procedure

The guidance and counseling program should assist cooperative work experience students in choosing and following suitable training objectives.

Involvement

Guidance services are involved in nearly every phase of the co-op program. Although there should be cooperation between the counselor and the teacher-coordinator, the primary responsibility of enrollment, placement and follow-up rests with the teacher-coordinator. The coordinator's effectiveness is evaluated in terms of successful training and adjustment of the students in his program.

Application

1. Effective Counseling - The counselor and teacher-coordinator should help each student to recognize his special interests and aptitudes through an interpretation of his school records, background and his inventory and test profile.
2. Selection of Students - The teacher-coordinator should work closely with the counselor in the selection of students for the co-op program.
3. Enrollment Procedure - The enrollment procedure should be well defined and understood by all concerned. They should know the factors which determine student selection and placement.
4. Parental Approval - The teacher-coordinator and counselor should confer with parents about the factors relating to vocational choice and career planning.

5. Periodic Counseling - The teacher-coordinator should review periodically with the students their a) career objectives, b) achievement in relationship to aptitude and ability, c) personal and social development, and d) job performance record.
6. Job Placement - The teacher-coordinator should maintain a current file of job opportunities available to graduates.
7. Follow-up - The teacher-coordinator should maintain a follow-up file of the graduates from the co-op program.

Career Tests

Tests most frequently used to determine interest, aptitudes and abilities: (test information can be obtained through the Area III Testing Department)

Interest

1. JOB-O

   Cost: $1.00 per booklet

   .10 per test--per test cost decreases with additional purchases. JOB-O generally recommended for grade 9.

2. United States Employment Testing Service (USETS)

   Cost: At present no charge to participating schools. USETS generally recommended for 10th grade students.

3. Occupational Information Access System (OIAS)

   Cost: $1,000.00 per year

   OIAS included terminal, telephone connection in addition to test booklets. Generally recommended for grades 9 through 12.

4. Armed Services Vocational Aptitude Battery (ASVAB)

   Cost: No cost when administered by Armed Forces.

   ASVAB generally recommended for 10th or 12 grade students.

Aptitude

1. General Aptitude Test Battery (GATB)

   Cost: At present no cost for test booklets; however, there is a 29¢ charge per test for machine scoring. Charge includes answer sheets and two machine printouts. GATB generally recommended for 10th through 12th grade students.

Abilities

1. Preliminary Scholastic Aptitude Test (PSAT)

   Cost: $2.50 per test plus $2.00 administrative fee.

   PSAT generally recommended for 10th and 11th grade students.

2. Scholastic Aptitude Test (SAT)

   Cost: $6.50 per test - SAT recommended for 11th and 12th graders.

3. American College Test (ACT)

   Cost: $6.50 per test - ACT recommended for 11th and 12th graders.

COOPERATIVE WORK EXPERIENCE

GUIDELINES FOR AN ADVISORY COMMITTEE

Procedure

Advisory Committees for a cooperative work experience program should give assistance to teacher-coordinators.

Involvement

Two topics will be explained: (1) justification of the advisory committee, and (2) the functions.

(1) The Vocational Education Act of 1963 makes the use of advisory committees mandatory for career programs at the state and national levels. If the instructional program is to be kept in tune with the needs of the individuals and the agencies to be served, they are also required at the local level. The term consulting committee is sometimes used instead of advisory committee.

(2) An effective advisory committee should add strength to the co-op program by serving as a sounding board for new ideas.

Committee Functions

Advisory committees can assist local school personnel by:

1. Reviewing the goals and objectives of the local co-op program.
2. Explaining the co-op programs to their friends and fellow workers.
3. Reviewing the course content or courses to be taught to see whether they are vocationally sound and are in keeping with the occupational needs of the community.

4. Reviewing ways and means of relating in-school instruction to on-the-job instruction.
5. Recommending instructional facilities to the teacher-coordinator and the school administration.
6. Interpreting regulations relating to the employment of minors.
7. Discussing local employment opportunities and standards.
8. Reviewing the guidance, counseling, and selection procedures by the employer at the training station.
9. Making recommendations regarding the placement and training of co-op students on the job.
10. Assisting in finding training stations for co-op students.

PLANNING FOR FOLLOW UP STUDY

This section is intended to identify significant decisions which will be made whenever a follow-up study is to be undertaken.

The completion of follow-up studies is a necessary but time-consuming job which should be carefully planned and executed if meaningful results are to be attained.

The steps outlined in this section are given in a chronological order which should be followed. Failing to complete any of the steps may result in incomplete returns and/or invalid data.

SURVEY PROCEDURES - A CHECKLIST

Survey Procedures	Check When Completed	For Information See Pages
1. Identify population to be surveyed.		13
2. Outline desired outcomes of the study and the tasks to be accomplished.		13
3. Determine the method of data collection.		14
4. Develop a time table for completing the study.		16
5. Assign personnel to oversee the study.		16
6. Appoint a committee to assist with the study.		17
7. Select the target population to be surveyed (if sampling is appropriate).		17

Survey Procedures	Check When Completed	For Information See Pages
8. Develop the instrument.		18
9. Develop the cover letter or covering instruction.		22
10. Meet with data processing people to discuss the instrument.		23
11. Try out (pretest) the instrument.		23
12. Revise the instrument, if needed.		23
13. Meet with data processing people to actually code the instrument.		24
14. Conduct the survey.		24
15. Tabulate the data.		25
16. Analyze the data		27
17. Interpret the data.		27
18. Prepare a report of the findings.		28
19. Disseminate the findings.		30

1. Identifying population to be surveyed:

This step is merely one of determining what group the survey results will describe. It may be the first step in the preparation for the survey or it may be the second step in the survey depending on the overall purpose of making a survey in the first place.

Example: (1) a follow-up of all former vocational students is required. (This is also the target population.)

(2) an assessment of the effectiveness of a given program is desired. (Then the target population for the survey may be a sampling of students, employers, other education agencies, etc.)

2. Outline desire outcomes of the study and the tasks to be performed:

The development of inadequate objectives is one of the major obstacles to conducting a successful and effective follow-up of former students. The following topics might be considered as basis for formulation of follow-up study objectives:

A. Availability of instructional offerings

B. Guidance, counseling, placement services

C. Condition of facilities and equipment

D. Student employment success

(1) Employed vs. unemployed

(2) Wage rates

(3) Employer satisfaction with the performance of ex-vocational program participants

E. Required data reporting

(1) Number of females/males in certain programs/courses

(2) Numbers of minority groups involved

(3) Handicapped persons served

(4) Disadvantaged persons served

(5) Other

Specific tasks for personnel:

By defining the specific tasks for persons who will be responsible for the follow-up study, and involving them from the beginning, chances for a successful effort are greatly increased.

3. Determine the method of data collection:

In any follow-up study, serious attention must be given to the data processing component since this component and its capabilities will predetermine to an extent the design of the entire follow-up.

The four commonly used data processing systems are: (1) manual, (2) mechanized, (3) output-oriented automated, and (4) data-oriented automated.

MANUAL SYSTEM

Data are stored on paper forms, usually the original questionnaires or other data collection instruments or some form of abstract. When searching for information the person needing the information must fumble through some type of file system. Except for the smallest data base this is the least efficient of the processing systems and probably totally unworkable with data base of any major size.

MECHANIZED SYSTEM

A system which uses some type of machinery to aid in retrieval of data. Card sorters and tabulators are the most common variations of this type of

system. Data are punched and kept on cards which are processed through the machines when information is needed.

This system is limited by the number of ways the machines can be programmed and though much faster than the manual system it is still very slow by modern standards.

AUTOMATED SYSTEM

An automated system is one which uses electronic computers. Data are stored on magnetic tape, magnetic disk, or similar devices. Depending on type, a computer can be programmed in nearly limitless ways to handle data in a minimal amount of time.

OUTPUT-ORIENTED AUTOMATED SYSTEM

The approach of this system is to base all data on a needs analysis. A particular information need is identified and a computer program written to provide the data base which will produce the information. As additional information is needed a new program must be written. If a question is asked which was not programmmed for, it may be next to impossible to answer the question without spending much time and effort writing special programs. This is relatively cumbersome, time-consuming and expensive.

DATA-ORIENTED AUTOMATED SYSTEM

The key to the Data-Oriented system is input-output independence. The input is determined by the kinds of information desired to be available later. This input obviously should be dictated by the objectives of the follow-up and the questions generated from those objectives. Output can be determined when the need for information arises. Commands for retrieving information can be easily established providing that the information is contained somewhere in the data input.

OTHER CONSIDERATIONS

Any mechanical or automated system of data processing will require that questions be formulated in such a way as to be machine useable. The open end type of question will be more difficult to input and therefore should be very carefully examined for useability.

4. Develop a time-line for completing the study

By considering all possible events while planning for a follow-up study, you are able to better anticipate personnel, time, and material needs.

One such time line might take the form of a PERT chart with dates inserted for completion of the various steps. Note that the physical act of "putting it on paper" will assist in determining those activities which are carried out simultaneously and where each activity is incorporated into other activities.

5. Assign personnel to oversee the study

The assignment of responsibility for the conduct of a follow-up survey is of the greatest importance if a successful survey is to be accomplished. (Too often this responsibility is left to the vocational instructor who is not in a position to spend the time and money necessary to carry out a total survey.) Persons responsible for implementing the follow-up must be prepared to carry a heavy load of leadership and orientation activities. At a minimum, Instructional staff members will need to understand the purpose of the survey, the type of data to be collected, and the time line for the study; data processing personnel must have an overall understanding of the total follow-up system--purpose, procedures, and use of any data to be gathered. Orientation time should include a discussion of intended feedback to those responding to the survey.

Equally important to orientation of staff appears to be communication with the student who will be asked to participate in the follow-up study.

In addition, the person(s) assigned to oversee the study must deal with numerous "publics" such as parents of students, school administrators, employers, government agencies, etc.

6. Appoint a committee to assist with the study

As important to the success of the follow-up study as the person(s) assigned major responsibility for the study is the makeup of an advisory group to assist with the study.

The advisory group should be involved from the outset in every phase of the follow-up system. Members of the advisory group must feel that they are part of the total system and not just a token group to give the follow-up study the appearance of a legitimate quest for information.

Select members carefully, orient them to the reason(s) for the study, seek their advice, listen carefully to their recommendations and keep them informed as to progress of the study.

7. Select the target population sample to be surveyed

(If sampling is appropriate)

Sampling may be used in follow-up studies and other types of research endeavors for any of a number of reasons. Primarily, samples are drawn because it may not be practical to evaluate the training received or the initial employment experiences of all former vocational students. Nor may it be practical to query every employer of former vocational students. Therefore, by drawing a representative sample of the total population to be surveyed the desired information may be gathered at a reduced cost and in a more timely manner.

However, there are two minimum criteria for sampling purposes: (1) the sample must be adequate to allow estimates of the characteristics of the target population to be made with relative assurance of accuracy, and (2) the sample must be "representative" of the entire target population.

There are no absolute standards governing the size of a sample. However, there are some helpful hints to keep in mind when deciding upon a sample size.

A. The more personnel, money, and time available for the follow-up study, the larger the sample can be.

B. The more categories of data to be collected the larger the sample must be in order to assure including enough participants in each category so that valid inferences may be made.

C. The greater the accuracy of information desired the larger the sample must be.

Samples that are too small will probably invalidate the results while too large a sample will be a waste of resources.

In order to minimize selection bias the sampling procedure used should insure that all members of the target population have an equal chance of being included in the sample.

8. Develop the survey instrument:

Having determined the goals and objectives for the follow-up study and how and from whom the data will be collected you are now ready to put together the questions that will elicit the desired data in relevant form.

Former Student Survey:

In general, questions put to former vocational program participants will fall into three broad categories for data collection purposes: (1)

employment experiehces since leaving school, (2) further education since leaving school, and (3) how well did the vocational courses or programs prepare the student for entry into employment.

An important item to be included on the former student questionnaire is the request for permission to contact present or past employers regarding the performance of the ex-student "on-the-job."

Questions addressing employment experiences since leaving school probably may include such items as:

- How soon after leaving school was employment obtained?
- Is the present job related to the vocational training taken?
- The salary range of the present job?
- How satisfied has the ex-student been with jobs held since leaving school?
- How many employers has he/she worked for since leaving school?
- How well prepared was the student for entry into the present job?
- Name of present employer?
- Permission to contact present employer?
- Working part-time or full-time?

FORMAT CONSIDERATIONS:

Data processing will be of primary importance when developing a suitable format for the follow-up questionnaire.

Whether processing data manually or by means of automated equipment, time and cost factors must be considered.

The type of questions asked and the structure of the questions will determine the ease of coding and/or analyzing data received. Open-ended questions are more difficult to process than forced-answer (or forced-choice) questions.

It is extremely important to work with the person, or persons, who will be processing the data in order that the design of the questionnaire lends itself to timely, cost effective results.

APPEARANCE OF THE QUESTIONNAIRE

A questionnaire should be pleasing to the eye and simple in content. Questions should not need lengthy explanations. The first series of questions should set the tone for the entire questionnaire. Questions which are easy to answer will make for a good beginning.

Those questions which will require the recall of information or that ask for personal opinions or judgements should be placed near the end of the questionnaire.

The graphic appearance of the questionnaire is very important. Research has shown that a questionnaire which is mimeographed on white paper will evoke a lower response rate than one which is printed on green paper.

Some general suggestions:

- The title of the survey should appear on the first part of the questionnaire.
- The name of the sponsoring agency should be on the front of the questionnaire preferably centered at the top of the page.
- The name, title, and complete address where the questionnaire is to be returned should be the last item of the questionnaire or be included on the first page if that is possible.

. A place for the respondent's signature (which can be removed after data is recorded) is important.

Questions concerning further formal education normally focus on the amount of additional education or training the former student has been exposed to. It is in this area of questioning that information may be gathered as to future plans he/she has for additional education or training and the reasons for obtaining further education or training experiences.

The third category of questions having to do with how well prepared the former student was for entry into employment could be included in the "Employment Experiences" portion of the data collection. If, however, it is desired to have feedback on specific areas of the vocational courses or programs, this is the place to ask questions.

REMINDER:

If the desired data is already available from another source - school records, reports to other agencies, etc., don't ask a former student to try and furnish it for you. Keep all questions and/or statements simple and explicit. If there are doubts about the wording of a question, rewrite it in a different way and field test it to see which version elicits the data in the desired form.

EMPLOYER SURVEY

The basic principles for preparing the questionnaire for follow-up of former vocational students also will apply to the follow-up of employers.

The most common data collection procedures for obtaining information on former vocational program participants from the employers fall into two styles:

A. The employer responds to a mailed questionnaire. The questions asked deal with former vocational students as employees in general.

B. The employer responds to a mailed questionnaire concerning a specific individual employee who has had vocational training.

Questions which are commonly asked of employers:

- Were you aware that the employee had had vocational training?
- How does this particular employee compare with other employees who have not had vocational training?
- What jobs do former vocational students enter in your firm?
- What strengths or weaknesses are apparent in this employee's training?
- Is the employee capable of advancement without further training?
- Would you be willing to assist the school in an advisory capacity in the area of your expertise?
- What suggestions do you have for strengthening the vocational training program in the school?

NOTE:

It is recommended that the data from employers be analyzed by individual program areas and on an individual student basis. Also, the employer furnished data about an individual student should be compared with the follow-up data gathered from the student.

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9. Develop cover letter or covering instructions:

A brief statement (or cover letter) should accompany all questionnaires to describe the purpose of the survey and the use that will be made of the information being gathered.

This statement should be endorsed by a person who is known to the person(s) being surveyed either personally or by reputation.

10. Meet with data processing people to discuss the survey instrument:

Each question of the questionnaire should be reviewed by a data processing person before the questionnaire is printed.

It is quite frustrating to find, after data have been collected, that the information is not necessarily usable in the form in which it has been collected.

REMEMBER:

The types and structures of the questions will determine the difficultly of coding and analyzing responses received.

Open-ended questions are much more difficult to process than are the forced choice questions.

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11. Try out the instrument:

The best way to determine if the questionnaire directions and questions are clearly stated is to try out the instrument with a small group of present students and former students.

Such a trial will establish if the questionnaire obtains the desired results or if alterations need to be made.

12. Revise the instrument if needed:

If it has been determined that revisions are in order, it will be necessary to again "try out" the new instrument. Such a trial will establish if the revisions will clarify any doubtful items and gain the desired results.

13. Meet with data processing people to code the instrument:

Coding is a necessary procedure for analyzing and displaying information (data). Preplanning will not only make the recording and reporting of data easier but will improve the accuracy of the survey.

Keep a code book or log which describes all questionnaire items and their response categories. In simple surveys it is sufficient to use a blank copy of the questionnaire. More elaborate questionnaires may require a code sheet designed specifically for the survey.

If a questionnaire is properly coded the data may be keypunched directly into EDP cards. The punched deck of EDP cards is ready for numerous categories of analysis.

14. Conduct the survey:

In general, you are wanting a 100% return of your survey instrument. Therefore you should use as many techniques, as money and time will allow, to follow-up with tardy respondents.

A. Mail the questionnaire -- first mailing.

B. Within one week -- mail a follow-up card to non-respondents.

C. Within three weeks of the first mailing -- send a second questionnaire along with a second cover letter.

D. Within one week of the second mailing -- mail a second follow-up card.

E. Within two weeks of the second questionnaire mailing -- send a third questionnaire.

F. Within one week of the third mailing -- send a follow-up letter.

G. Last effort -- telephone the non-respondents.

Although there is no definite percent of returns which will "make" or "break" your survey, the closer you approach the 100% return, the more conclusive will be the data.

REMEMBER:

Non-respondents to mailed surveys do tend to bias the survey results in favor of the more actively involved group who do respond.

A number of research studies have been conducted which analyzed the significance of non-responses. There is no apparent agreement among these researchers as to the real significance of non-responses except the amount of involvement of these non-respondents in the subject of the survey.

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15. Tabulate the data:

Designing the survey also requires that specific plans be included for tabulating and interpreting the returned data.

Going back now to the original need and goals for making the survey, it is imperative that the data be tabulated in correct categories for interpretation. The preliminary step in tabulating data is usually the counting of the responses for every item as well as the number of respondents.

REMEMBER:

Count those who do not respond to a given item into a "NO RESPONSE" category. Some people, although they return the questionnaire, simply do not complete every item or every section of the questionnaire. A non-response to a given item is not a "NO OPINION" response. IT IS A NO RESPONSE.

As you plan for the types of reporting formats you will utilize for the various recipients of the results of the survey you also must plan for the merging and/or separating of data to determine similarities or differences between responses to a given item.

16. Analyze the data:

Examine the data and the various responses as they have been tabulated. Typically, tabulation displays will provide the number of respondents and the number of responses for each part of a particular item. Numbers may be converted to percentages if desired for reporting purposes. When using percentages care must be taken to describe the respondents so as not to give incorrect impressions of survey results.

REMEMBER:

Examine the tabulated data to be sure that, when interpreted, incorrect conclusions will be less likely to be reached.

By reporting percentages alone, the conclusions are usually misleading to the reader.

For Example: 3 out of ten respondents will give a 30 percent return, as will 30 out of 100.

17. Interpret the data:

Interpretation of the collected, tabulated, and analyzed data is extremely important. It is at this stage that conclusions are reached which may lead to specific recommendations for changes in, or perhaps even deletion of, vocational courses or programs.

REMEMBER:

Be sure that the interpretation of data is rational and as accurate as possible.

All conclusions drawn as a result of data interpretation should be backed up by solid information, not by lack of information.

18. Prepare a report of the findings:

In the reporting of follow-up information consideration must be given to the users of the information and the type of report most meaningful to them.

The users could be:

A. The general public

B. Educational planners at local, state, or federal levels

C. Educational administrators at local or state levels

D. Local Boards of Education

E. Vocational Advisory Committee

F. Respondents to the survey

Each of these users has a different need for the report of survey results. The general public does not ordinarily require a greatly detailed report. Probably a highlight report is sufficient. Educational planners will undoubtedly want a very detailed report while educational administrators, advisory committees, and respondents to the survey may want only a summary of the findings. Conceivably then, a single report could be organized for the convenience and use of these varied audiences.

One such format might be:

A. Highlight summary

(1) Purpose

(2) Procedures

(3) Results, conclusions

B. Summary

(1) Purpose

(2) Procedures

(3) Results, conclusions, and recommendations

C. Force trends in the area

D. Results of the survey

E. Conclusions drawn from analyzing data

F. Recommendations for policymaking and decisionmaking for program changes

G. Appendixes

(1) Procedure - data collection and analysis, etc.

(2) Returns - return rates, etc.

(3) Limitations or special information

(4) Data displays - tables, charts, etc.

(5) Copy of survey materials

REMEMBER:

All of your publics may be interested in the results of your follow-up study, but not every user will need the detailed report of your findings.

Design a reporting format which is organized in such a way as to be separable for various audiences.

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19. Disseminate the findings:

A few factors to consider when disseminating follow-up information:

A. Go through the proper chain of command when presenting data.

B. Avoid school-to-school or program-to-program comparisons. Stick to the survey results.

C. Send an accompanying cover letter telling the recipient what the report is (if appropriate).

D. Present data to as many appropriate groups, agencies, and individuals as possible.

VOCATIONAL FOLLOW-UP SURVEY - CLASS OF 1981

Portland Public Schools
Summer, 1983

We are conducting a survey of 1981 graduates and early leavers of _____High School who were in vocational career programs, and we are wondering if you have a few minutes to answer some questions?

We know that you were in the _____ vocational program and we are conducting this survey to determine how this training has helped you in your career choice. Your answers will be kept confidential - your name will not be used, only your responses. If there are any questions you do not choose to answer, please feel free to say no. We are trying to improve our offerings to students and the best way to do so is to ask those people who have been through our programs.

1. What is your current employment status? (What have you been doing this spring?)

_____Employed full time (30 hours or more a week)

_____Employed part time (less than 30 hours a week)

_____Homemaker

_____Military service

_____Unemployed, but actively seeking employment

_____Unemployed, not seeking employment

Job Title_____

Job Duties_____

_____

Company Name (If self-employed, write "self")

_____

City State Zip Code

2. Is this job related to your high school vocational training?

_____yes

_____no*

*If the classes you took are not related to your present occupation, have these courses helped you in other ways?

_____

_____

3. Since leaving high school, what OTHER full or part time jobs have you held? Have any of these jobs been related to the vocational training you received?

Jobs	Yes, related	Somewhat related	No, not related* at all
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

4. What is your current education status?

_____Attending school full time Where:_____

_____Attending school part time

_____Not attending school

5. If you are attending school, or involved in additional training, is your program of study related to the vocational training you received in high school?

_____Yes

_____No

6. If your area of study or present job is not related to the vocational training you received in high school, why did you change?

_____more money in present career choice

_____more prestige in present career choice

_____present career choice more interesting

_____could not find job in other occupation

_____did not have enough training for entry level position

_____Other_____

7. What classes do you remember taking at _____ High School that were part of the vocational program or directly related to it? Which of these classes were helpful to you in what you are doing now? Which of these courses are not helpful to you now, or need to be improved?

Class	Very helpful	Moderately helpful	Not helpful	Needs* improvement
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

NOTE TO INTERVIEWER: Remind person of other courses that normally would have been taken.

*Do you have any suggestions that might make any of these classes more helpful in preparing students for work?

Class	Improvement
_____	_____
_____	_____
_____	_____

8. What specific things need to be emphasized more in the vocational program you took in high school? (e.g. math or writing skills, work experience, higher standards, more homework)

_____

_____

_____

9. If you are currently working full time (30 hours or more a week), what is your monthly income before taxes?

_____ below $500	_____ $800-899
_____ $500-599	_____ $900-1099
_____ $600-699	_____ $1100-1299
_____ $700-799	_____ Over $1300

10. We are interested in the counseling program at _____ and are wondering if you took advantage of its service? Did you use the counseling service for the following, and how would you rate the service:

	Yes	No	Excellent	Satisfactory	Poor	Not available
Career planning						
Selecting high school courses						
Personal problems						
College or after high school ed.						
Finding a job						

11. Do you feel that your high school vocational training was of value to you?

_____Yes

_____No

Thank you for the time in answering the survey. With the information you provided we hope to improve our special programs. Would you be willing to answer follow-up questions in a few years? _____yes ____ no. Is there some way we can reach you in case your current address or phone is changed? (e.g. friend or relative?)

_____

Dear Mr. Employer:

The purpose of this survey is to gather opinions from employers of graduates and early leavers of high school vocational programs. We are trying to determine the adequacy of the training received in high school. The confidential information that you provide will help schools update their career preparation programs and keep them abreast of new developments.

Thank you for your assistance.

Sincerely,

Director, Career & Vocational Education

NAME OF COMPANY_____

MAILING ADDRESS_____

TELEPHONE NUMBER_____

MAJOR FUNCTION OF BUSINESS_____

NAME OF PERSON COMPLETING FORM_____

_____
(Signature)

_____ has given us permission to contact you as his/her present employer. He/she was involved in a vocational _____ program in high school.

Is he/she ar employee of yours? ____Yes ____No How long?_____

If no, has he/she ever been employed by you? ____Yes ____No How long?____

When interviewing this person, were you aware he/she had been involved in a vocational program in high school? ____Yes ____No

Is this person's present job related to the vocational training taken in high school? ___Closely related ___Somewhat related ___Not related ___Don't know

For each skill area below answer the 4 questions to the right by marking the appropriate answer	Question 1 How important is this skill for his/her present job?	Question 2 How would you rate him/her on this skill?	Question 3 How does he/she compare with others of the same age who had different training?	Question 3 Does he/she need more instructions in this area? (Check yes or no)
Skill of using or operating tools, equipment, materials, machines in your work	___None ___Slightly ___Average ___Critical	___Very Low ___Low ___Average ___Excellent	___No one to compare with ___Below ___Same ___Above	___Yes ___No
Everyday knowledge of work methods and procedures	___None ___Slightly ___Average ___Critical	___Very Low ___Low ___Average ___Excellent	___No one to compare with ___Below ___Same ___Above	___Yes ___No
Knowledge of basic principals and concepts. (Of present job)	___None ___Slightly ___Average ___Critical	___Very Low ___Low ___Average ___Excellent	___No one to compare with ___Below ___Same ___Above	___Yes ___No
Ability to use arithmetic to solve work problems	___None ___Slightly ___Average ___Critical	___Very Low ___Low ___Average ___Excellent	___No one to compare with ___Below ___Same ___Above	___Yes ___No
Skill of speaking, writing, drafting, sketching to communicate ideas.	___None ___Slightly ___Average ___Critical	___Very Low ___Low ___Average ___Excellent	___No one to compare with ___Below ___Same ___Above	___Yes ___No
Skill of reading printed matter, tables, and diagrams.	___None ___Slightly ___Average ___Critical	___Very Low ___Low ___Average ___Excellent	___No one to compare with ___Below ___Same ___Above	___Yes ___No
Keeping records, making reports, and routine paper work.	___None ___Slightly ___Average ___Critical	___Very Low ___Low ___Average ___Excellent	___No one to compare with ___Below ___Same ___Above	___Yes ___No

PLEASE RATE THE FOLLOWING TRAITS

5. Safety habits ____Always safe ____Safe most of the time ____Seldom safe
6. Attendance ____Above average ____Average ____Below average
7. Punctuality ____Above average ____Average ____Below average
8. Reliability ____Above average ____Average ____Below average
9. Ability to take and follow orders ____Above average ____Average ____Below average
10. Quality of work ____Above average ____Average ____Below average
11. Volume of work ____Above average ____Average ____Below average
12. Dealing with customers ____Above average ____Average ____Below average
13. Dealing with supervisors ____Above average ____Average ____Below average
14. Dealing with other workers ____Above average ____Average ____Below average
15. Appearance ____Above average ____Average ____Below average
16. Over-all-attitude ____Above average ____Average ____Below average
17. Is this person capable of advancement in your business without further training? ____Yes ____No

What recommendations would you make for improving the high school training for future students? (use back of paper if necessary)

_____

_____

_____

_____

The youth organization's program of activities can complement, supplement, and strengthen a cooperative work experience program. Combined with classroom instruction and significant projects, the program of activities gives greater scope and depth to the total instructional program. Success in a career field is dependent upon attitudes that lend themselves to leadership development within an educationally sound and oriented, student-centered program. The youth organization's program of activities provides an avenue for the enrichment of the instructional program through competitive events and activities (civic projects, social awareness, and career development) planned by students under the guidance and direction of the teacher-coordinator.

The program of activities can be a fountainhead of inspiration to cooperative work experience students. Participation in the total program of activity can stimulate student interest and impel them to excel in their studies, their occupations, and their careers. Many chapter activities provide learning situations which can improve knowledge, increase skills, and shape acceptable attitudes that will advance their career objectives.

There are a considerable number of youth organizations of national scope that are oriented to specific occupational areas. Among the most important are:

DECA	Distributive Education Clubs of America
FBLA	Future Business Leaders of America
FHA	Future Homemakers of America
FFA	Future Farmers of America
VICA	Vocational Industrial Clubs of America
OEA	Office Education Association

Membership in these youth groups is recognized by first being a registered member of the associated school program or class. The second requirement is to pay membership dues to the state and national offices of the youth group.

When cooperative work experience students emerge from any of the youth organization's activities with a better comprehension of the system in which they operate and a broader understanding of their responsibilities in the economy, the youth organization's program of activities will have served a worthwhile purpose.

HOW A YOUTH ORGANIZATION CAN CONTRIBUTE TO ITS MEMBERS, SCHOOL AND COMMUNITY

Chapters can best serve their schools and communities if they provide a variety of activities throughout the year. A chapter will get its full reward of enthusiasm and member satisfaction if it plans activities in all five of the following recommended areas:

PROFESSIONAL

Most chapters provide professional meetings to enlighten their members' knowledge of various fields. Guest speakers, panel discussions, and films are frequently scheduled for meetings, and many chapters take field trips to study specific problems relating to their instruction. Possibly the most widely used professional activity is the annual Employer-Employee Banquet. This function is used by more chapters than any other single activity to create good will in the community.

Competitive Activities and project participation are also considered a professional activity. Local chapters are usually the scene of competitive preparation; District or Region, State and National Leadership Conferences provide the proving grounds for students to test their knowledge, skills and ability with those of others. Recognizing individual achievement is only one objective of competitive events and projects. Their basic purposes are to improve the knowledge and skills of students through practice and application. Win or lose, students profit from their experiences.

Alumni follow-up is yet another type of professional activity. Many chapters sponsor annual socials in honor of ex-students. Some have even

established scholarships in local colleges that are awarded to deserving graduates.

CIVIC ACTIVITIES

This area is one in which a student organization, such as a VICA Chapter serves its entire community. Civic projects can develop a wholesome reputation for your chapter. Many chapters sponsor, or co-sponsor such activities as March of Dimes, Heart Fund, Community Chest, United Fund and others. Activities of this nature offer a valuable service to the community and develop respect for the local VICA Chapter. Other civic activities inform the public about the cooperative program and develop good public relations. Chapters often enter floats in parades and sponsor booths at community fairs that tell the cooperative program story. Through working with Chambers of Commerce and other local merchant and business organizations, a chapter may provide a worthwhile service to their local community by conducting comprehensive projects relevant to the community.

This typical school offers a multitude of opportunities for a chapter to be of service. Some chapters assist in school-wide activities, such as clean-up drives and citizenship campaigns. Others decorate the school, local buildings, or parks for special occasions such as Christmas, Halloween, Easter and Thanksgiving. Assembly programs can serve the school. Speakers or films of general interest can be presented to the student body in open meetings of the chapter.

BENEVOLENT ACTIVITIES

This activity involves the helping of others with no regard for recognition other than the satisfaction derived from helping those in need. Some suggestions might include naming a chapter grandmother and helping

provide for her through the year, sponsoring a Christmas party for needy children or an orphanage, and preparing Thanksgiving and Christmas boxes for the needy. Civic organizations can be contacted for additional ideas for benevolent activities in local communities. Chapters can operate continuous projects by assisting local welfare agencies. Certainly, the possibility to serve the needy is unlimited.

FUND RAISING

There is no question about the importance of a chapter's sound financial status. Sales projects are educational and fun too, when every chapter member participates. Sales projects provide a common goal for achievement and can develop an esprit de corps among chapter members. Members are usually more enthusiastic about paying dues when they know their chapter earns the money it spends. Ideas range from special sales to promoting style shows, but the type of project adopted is of little consequence when compared to the pride members develop in a chapter that pays its own way as much as it can.

SOCIAL ACTIVITIES

Chapters should provide recreation for their members. One of the original philosophies of the youth organization, as true today as ever, is to provide social activities to make up for the school functions members miss because of off-campus training. Socials can also be used to acquaint others with the cooperative program. Chapters that invite visitors, such as faculty members, merchants, and prospective students and parents to their socials usually receive increased public interest as their reward.

HOW TEACHERS EFFECTIVELY USE YOUTH ORGANIZATIONS

A. To Complement Classroom and On-The-Job Instruction

B. To Encourage Student Responsibility

C. To Develop Student Leadership

D. To Develop and Strengthen A Close Student-Teacher Rapport

HOW STUDENTS BENEFIT FROM YOUTH ORGANIZATIONS

A -

Chapter Identity - Sense of belonging
- Purpose
- Achievement

Personal and Group Recognition - for accomplishments and a job well done

B -

Motivational Involvement - A student-centered organization of, for, and by the student
- The student's voice in the cooperative program

Group Participation - Learning to work and deal with people
- The experience of group compromise
- Successes and failures

C -

Competitive Activity - The development and quest for excellence

Unlimited Opportunity for Personal Growth & Development

POSITION OF A YOUTH ORGANIZATION IN RELATION TO COOPERATIVE WORK EXPERIENCE PROGRAM OF INSTRUCTION

	Classroom	On-The-Job Training	Youth Organization
Nature of Course	A body of knowledge: the discipline of the cooperative program	A method of instruction which is an integral part of the program, plus a source of supplementary knowledge	A tool of instruction as an integral part of the program which reinforces what the student learns in the classroom and on the job, permitting him to put to practice what he has learned
Standards	Prescribed by coordinator	Prescribed by employer and training sponsor and coordinator	Prescribed by other chapter members and individuals and groups outside the classroom with whom in contact
Motivation	Inspired by coordinator	Inspired by employer and employment situation	Inspired by conscious or unconscious interactions with fellow chapter members while working toward common interests, goals and achievements
Evaluation	By coordinator, based on standards of perfection determined by coordinator	By employer and/or sponsor, based on standards determined by employment situation	By fellow members and sympathetic audience, allowing for immaturity and effort to achieve perfection
Influence	Coordinator: Planning and arranging, conducting, responsibility for success	Employer and sponsor, Planning and arranging, conduction, responsibility for success	Student: Participation in planning and programming, assume share of responsibility for success Coordinator: Advise and guide, responsibility for guidance most likely to assure success